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JOURNAL OF OSTEOPATHIC OPHTHALMOLOGY, RHINOLOGY & OTOLARYNGOLOGY

COLUMBUS, OHIO

Vol. XII October-November-December, 1929 No. 4

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Journal of Osteopathic Ophthalmology, Rhinology and Otolaryngology

Columbus, Ohio

Vol. XII October-November-December, 1929 No. 4

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MANUSCRIPTS — Manuscripts shall be typewritten, double-spaced and the original submitted. Manuscripts must not be rolled and are not returned.

ILLUSTRATIONS—Half tones and zinc etchings will be furnished at cost when satisfactory photographs or drawings are supplied by the author. Each illustration, table, etc., should bear the author's name on the back. Photographs should be clear and distinct; drawings should be made in India ink on white paper.

NEWS—Members are requested to send in items of news. Name of sender should accompany item.

REPRINTS of articles in quantities of 500 or more may be ordered within ten days after publication at cost price.

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EDITORIAL

DR. CHARLES M. LARUE, *Editor*

The subject, "What Is An 'Osteopathic' Eye, Ear, Nose and Throat Specialist?", is similar to attempting to define and answer the question, "What is a Bird?" There are so many different varieties of birds that in the final analysis they have only a few relatively minor points in common. They all see, fly, eat, have feathers and an instinct for reproduction and self-preservation. Most of these attributes are common to so many other forms of animal life that they are not distinctive. Birds do, however, have some traits peculiar to the different types. They range in variety of size from the tiniest humming bird to the majestic eagle and the ostrich, in usefulness from the pelican to the indispensable hen, in color and beauty from the vulture to the graceful peacock and multicolored Hungarian pheasant, in music from the quack of the duck to the charming warble of the nightingale and the southern mocking bird.

So, also, in defining the perplexing question, "What Is An 'Osteopathic' Specialist?", there are many and varied types, styles and fads.

A graph showing the entire list of "Osteopathic" Specialists according to respective ability, training, doctrine, qualification, equipment, personality, scope of mental caliber and research, etc., etc., would resemble a graph of the New York Stock Market over the past few weeks. In the use of drugs they range from the Chiro to the M. D., in surgical proficiency from the unskilled to the highest skilled, in equipment from the index finger to a line similar to Sharp & Smith, in Osteopathy from zero to Andrew Taylor Still, in ethics from worse than nothing to one hundred percent, in personality from Lon Chaney to John Gilbert, and in doctrine from those adopting any electrical fad which shows signs of a good graft to those methods of proven value including Osteopathy.

Unless one knows his man when looking in the directory for an "Osteopathic" specialist to refer a patient to it is similar to tossing a coin "Heads or Tails." There is no standardization at present. Anyone who is a member of the A. O. A. is qualified to become a member of the O. & O. L., immediately becoming classified with the Eye, Ear, Nose and Throat specialists. Some insert cards at once advertising themselves as specialists. There is no way to distinguish the one fingered type from the fully equipped. If he displays an M. D. prominently it is a safe bet that he is a heavy pill slinger, but there is no other visible distinction of his osteopathic proclivities or sectarianism.

The Osteopathic proctologists have harmonized their theories and practice to the extent that they almost unanimously agree that

the special treatment of hemorrhoids is directed chiefly to the rectum, whereas the eye, ear, nose and throat specialists can't localize the tonsil technique to an arch of less than four feet, embracing every implement from a finger cot to an electric vulcanizing machine.

There is a movement on foot now which if put to its fullest scope of usefulness will segregate the "Wheat from the Tare" and will result in converting a large percentage of the tare into good wheat.

The movement referred to is the one presented and adopted at the Des Moines O. & O. L. convention creating a Board of Regents to look into the preparation, training and skill of the different specialists and to issue certificates of approval to those deserving recognition. It is not only of advantage to the specialists who can and will meet the required standards but it safeguards the referring doctors who wish to know the type of specialist or person they are referring patients to for care.

Nothing has developed in the O. & O. L. Society so worthy of support and encouragement as this step forward toward classification and standardization of the Osteopathic Eye, Ear, Nose and Throat specialists.

We need standardization which can be fixed only by evidence of special training, skill and experience. Set the stakes high and certify those who will spend the time and money to qualify. There is little money and no credit in camouflage. It is the chief purpose of the O. & O. L. by this movement to encourage more of its members to raise the standard of qualification. Just as professional schools are increasing their requirements both in preliminary training and in lengthening their courses and as the State Examining Boards are stiffening their examinations for the purpose of raising standards, so, also is the O. & O. L. raising its standards. It is a worthy and much needed cause. The profession needs many more specialists of the proper type and fewer of the other.

The Osteopathic profession is not alone in this motly array of Eye, Ear, Nose and Throat specialists. The medical profession is equally, if not worse afflicted with half baked pretenders. They are far worse and more dangerous because of their unmitigated nerve to plunge into surgery without sufficient training and clinical experience which results far too frequently in maiming and murdering unsuspecting human victims. Many consider a six weeks specialty course a thorough training and immediately have a sign painter add, "Eye, Ear, Nose and Throat," to their signs and the slaughter begins. There is more butchery done under this mask in one year than was done in Flanders throughout the World War.

All our Osteopathic schools now have complete one year eye, ear, nose and throat post-graduate courses. Many of our best specialists are giving post-graduate instruction privately to a selected few. These courses are conducted under the tutelage of the very best technicians in this line in the country regardless of school of practice.

My sentiment is that, for "Osteopathic" specialists, our own institutions and instructors are the best. When Osteopaths rub shoulders too much with the Medics they are likely to get tainted. It fre-

quently spoils an otherwise good Osteopath. We should be more clanish and "Stick to the Ship."

There is no use beating around the bush and laying ourselves open to just and severe criticism. We are to encourage those practicing and contemplating practicing this specialty to avail themselves of the advantages offered by our schools and clinics to the extent that more well rounded and equipped "Osteopathic" specialists are in the field.

Not only is this being done in an editorial way but by publishing quarterly a magazine filled with the best and most educational matter our leading authors are capable of writing. No one, either the specialist or general practitioner, should be without the O. & O. L. Journal. There is much valuable material for every one who is an Osteopathic Physician. The small cost for the four issues annually is nothing compared to the value of the essays printed therein.

(Continued in next issue)

Notice

Elsewhere in this Journal is an application blank for you to sign, fill in and mail to our Secretary, Dr. Eva W. Magoon, 47 Dixon St., Providence, R. I., together with your check for $5.00. Your name will then go on our regular mailing list at once.

Those of you who are not members of the O. & O. L. or subscribers to the Journal will not get the following numbers. After reading this one can you afford to miss the others that follow? The next issue will contain an editorial telling what is necessary to become a worthwhile eye, ear, nose and throat specialist and the kind not to be.

Mail in your application and check today. All Osteopathic physicians are solicited and welcome.

Dear Editor: A doctor over this way seems to be pretty sore. The other month the Journal ran a story with the inference: "Half the Specialists Are Fakes." The next day the crowd wrote the author and demanded a complete retraction. He has the matter under advisement and would like to have my advice. What shall I tell him?

Dear Doctor: Indeed you have a serious problem on your hands. But there is a way out. We advise that you have the editor run a story under the heading: "Half the Specialists Are Not Fakes." That should square the matter.

Dear Editor: For many years I have snored so loudly that I frequently wake myself in the middle of the night. Is this a hopeless situation?

Dear Dr. Hardy: No, this is a simple case. To prevent waking yourself by your own snoring we advise that you sleep in another room.

"The Follies"

T. J. Ruddy, D. O., *President, Los Angeles*

Progress implies going forward, breaking down lines of resistance, overcoming opposition, making our opportunities pay—shedding light in the dungeons of ignorance concerning Osteopathy and particularly our specialties.

Many of us are too easily satisfied as is evident by our adherence to methods of progression which have been standing still long enough to merit the announcement of their demise.

Why should it be chosen to act in error when "information" and "thinking" are available and inexpensive and pay large dividends?

We are clinging to sentimental antiques that make of our mental store-rooms junk-shops. Surely an inventory of certain of our methods is not an impossible task, unless by chance we are rutted so deeply that we are fouled on the ridge of self-satisfaction, blind and intactile to the smooth paved highway parallel to our fogey time-torn-trails.

Osteopathy as a philosophy of therapy is progress personified. It is a step forward. It has and will move mountains of pain and suffering and by so doing overcome the opposition of prejudice, and gain the favor of millions who read, think and act.

It will continue to be thus in proportion to the progressive efforts of its champions—efforts that employ methods that are Osteopathic in principle.

Our light is still under the proverbial bushel. As "heralds" we are not 100 per cent torch bearers. We do many acts that are bold for Osteopathy though shrouded in darkness to a not understanding public, and this public includes members of our own profession, dentists, optometrists and drug vendors as well as the laity. Such acts are, I deem to brand, "follies" for the reason that it is folly to continue in these foolish practices.

Folly No. 1

Education. What does the public know about Osteopathic Specialists in Ear, Nose, Throat and Eye disease? Do more than a very small percent know that we exist? Why? Simply because we have not told them. Fifteen years have we been satisfied as organized Ophthalmologists, Otologists and Laryngologists to publish a journal in a language for members only. A few have subscribed for "extra" copies, placed them on the reception room table to find that the average lay reader loses interest the moment terms loom to fog the understanding. Others have mailed copies to Optometrists and Dentists with better results. The past three or four years the membership of the A. O. A. has been covered and many of our own profession are beginning to see the light.

How much more effective would be our educational program if "reprints" were procured from the Journal Editor to be broadcast among at least the general practitioners to whom each one looks for referred work. This would be specific education on a definite subject and would be read and its hinted purpose put into practice. Too often the general practitioner thinks he can "cure" a pterygium;

"cure" an infected tonsil; do a paracentesis; clear up a sinuitis; "treat" everything from styes to hemorrhagic glaucoma only to learn all too frequently that the pterygium will "flare up" later because of an uncorrected error of refraction placing Osteopathy and its representative in disrepute. He should have referred the patient to an Osteopathic specialist for surgery and then refraction. The general practitioner has not learned that a chronic flabby atonic tortuous crypt tonsil will not disinfect regardless of how many treatments or how long the time period through which the course has been pursued.

The trained specialist who has observed during his years of preparation thousands of these pathologies under treatment knows these facts and is in a position to keep the escutcheon of Osteopathy untarnished, by diagnosing the stage of pathology present, whether the infection is saprophytic or pathogenic and is prepared to remove the tonsil by a distinctive progressive method and with equipment far in advance of the drug-surgeons armamentaria.

A paracentesis is not as simple as the description might imply. The instances are legion where the pathology was a myringitis and should not have been incised or where the exudate in the cavum was "simple" only to be infected by an improperly prepared field through which the knife passed, all of which could have been prevented by the learned and trained specialist.

An elaboration of a great many instances of pathology where diagnosis and treatment have gone awry in the hands of the "hopeful" but unprepared general practitioner could be recited, each one a testimony to convict the offender—and you and I are culpable for our failure to "teach" our fellows in Osteopathy, who in turn, by calling counsel, would convey to the public that "Osteopathy is a complete system"—when its representatives afford a *complete* knowledge and skill in the thing that should be done to give the patient relief and cure in minimum of suffering, loss of time, expenditure of money; and in the integrity of structures and function through the postlude.

Another phase of our education is the character and quality of the material appearing in our Journal. Not too often does there appear technical essays on What to do and How to do it. We have been too bent on issuing a Journal that might in some mysterious way interest the general practitioner in doing the small jobs in our line, and, even in this we have failed.

Has there appeared a single article on How to give a nasal irrigation and what the general practitioner might expect from the use of this remedy in the absence of a comprehensive diagnosis? No. Yet the G. P. has unwittingly infected ears via the tubes, spread infection to clean sinuses, increased the turgescent or hypertrophic membranes by a too low or too high temperature of the solution or by a too small quantity of the solution or possibly by the reservoir being placed too high, or the flow too fast. Too, the patient has been continued on this superficial service when counsel (education) would have resulted in the patient being relieved and satisfied—not merely toyed by what must be apparent to the patient. The number of neglected glaucomas, optic atrophies, hemorrhagic retinites, errors of

refraction, primary deafness—and even advanced deafness—are tombstones in the grave-yard of our failure to give the general practitioner boundary lines to limit his scope for the good of humanity and Osteopathy.

Our Journal also has failed to make better surgeons of our own members in Cataract, Glaucoma, Strabismus, Mastoidectomy, Ossiculectomy, hare-lip, cleft-palate, plastics of lids, alae, lips, etc., and even the alleged "simple" tonsillectomy has not been detailed.

Yes, we need a literature for the general practitioner; a literature for our own members and a literature for the Dentist, Optometrist, M. D., and the public respectively, if we are to occupy in the near future our deserved place.

Education of the Dentist

The dental profession is rapidly becoming acquainted with Osteopaths and the scope of the Osteopath, if not Osteopathy, through affiliation in the Clinical Group. A large number of the "groups" include Orthopedics, Obstetrics, general surgery, physiotherapy, laboratories and general Osteopathy. Too few of these clinics emphasize the Specialist in Ear, Nose, Throat and Eye. Perhaps the chief reason lies in the regrettable fact that we have not sufficient well-trained men and women in this line to supply the demand.

In Los Angeles with its nearly one thousand practicing Osteopathy as physicians and surgeons and some two dozen practicing as Eye, Ear, Nose and Throat specialists, there occurs every few months a call for a skilled specialist to affiliate in a clinical group. The members of the group eventually become self-centered and in the absence of staff meetings seldom see one another or know what his colleagues are doing, thus an opportunity is lost wherein much good could be accomplished. Arrangements should be made to have the dentist pass on the degree of any dental pathology present in all sinus eye and ear patients at the same time familiarizing the dentist with the nature of the corelated pathology in the head region of the patient in question and the nature of the treatment to be given, the instruments used and the advantages to the patient over the "old" classic procedure. Reprints of articles written by him or by another Osteopathic specialist treating of relations between dental and neighboring structural pathology should be handed to the dentist regularly. He should be invited to Osteopathic meetings, professional and social. Committees in service clubs, civic organizations, community chest drives, et al. should be encouraged to include the dentist and the Osteopathic specialist. Our specialists should also seek contacts in dental meetings and create when possible, openings to appear on dental programs, local, state and perhaps national. There is much in common and such recognition by the dental profession would be of mutual benefit to the public, dentist and Osteopath.

What is possible in "groups" is to a great measure feasible in the conduct of affairs by the independent specialist. In fact the opportunity offers even greater rewards, in the same channels, for education of the dentist on our distinctive methods and means.

The profession needs and should have a fund to cover the cost

of reprints, in part, or in toto, to be distributed as indicated above, and our very efficient A. O. A. publicity director, Ray Hulburt, might be of great assistance by suggesting titles and subject matter to specifically meet these requirements, and I believe the time is ripe to make of our O. & O. L. Journal a source and means for this literature.

Education of the Optometrist

General rules apply equally direct to dentist and optometrist. The optometrist occupies a unique position in society not wholly unlike ourselves. His position is a breaking-away from the old school, allegedly to improve a certain service, and with the advanced standards in training they promise well to justifiably substitute for the Drug-Oculists' "drops" and "manifest" methods, a rationale in refraction that is proving acceptable to the public and profession alike.

Though our methods in refraction are similar and our oculist's fields require that he perform or supervise his own refractions it needs not be that a breach be permitted to separate us.

The progressive and enterprising optometrist is ever ready to improve his knowledge of the eye and is keenly alive to an invitation to see our work. He delights in seeing a nose or throat operation quite as much as to witness eye surgery; however, the latter should be more alluring. Dr. S. G. Biddle, Los Angeles, employs an optometrist and has trained him to assist in his office and hospital services. He has the optometrist accompany him to the general hospital to observe his work, whether mastoid, cataract or nose and throat surgery and as a "clerk" to make notes as he does his rounds on the wards.

Another Osteopathic specialist sends his refraction prescriptions to the optometrist, (perhaps for monetary reasons) to in turn receive referred patients for consideration of pathology present.

These contacts open the way for invitations to address the Academy and on a number of occasions the Osteopath has appeared on local and sectional programs. Such instances can and should be multiplied in every community where one of our specialists practices.

Why should we not have articles written by optometrists on "The Fusion Center in Hypermetropia," "Convergence Insufficiency in High School Age and Its Cause" appear in our Journal or journals? The "reprint fund" would liquidate the cost of say 100 reprints and the "extras" ordered by the writer at a small margin above "costs" could be used to remiburse the "fund." The distribution by the optometrist would not prejudice the interests of Osteopathy; to the contrary, those reprints would show to the public an endorsement that would carry further than any form of "tooting our own horns."

The battle cry of our A. O. A. President is "Tell the Public." Are these not golden opportunities then to herald the tidings to a hungry public? The public yearns continuously for organized systems that spell health without drugs and needless surgery and to foster "public needs" is a work of missionaries, and are we less? Our labors always have been thus and will continue to be until the A. M. A. lies down in peace with the lamb—may we not be shorn.

(To be continued)

Not An Excuse — A Reason!

Dr. T. J. Ruddy
Pres., Los Angeles, Calif.

There is no apology for publishing our President's cut a second time. There are at least two very good reasons for doing so. One is that the publishers by mistake printed his address Wichita, Kansas, instead of the correct address, which is Los Angeles, Calif., another reason is that styles and lip decorations have changed tremendously in the last decade, therefore, the picture in last issue was both out of date as to location and personal pulchritude.

One doctor accused him of having a "cancer of the upper lip." Now, candidly, if the doctor can't distinguish black hair from cancer he should never be issued a P. & S. in California or his brunette patients are sure to lose some very useful and cosmetic parts.

Other than a slight fading in color and quantity of hair there is slight change over this period of time in our President's appearance. We earnestly hope there is as little change at the end of the next half century.

For another reason see Page 6 in May 1926 Journal.

We are glad this error occurred so as to have a reason for running his picture again. Rah! Rah! Rah! Dr. Ruddy!

Science Puzzles Over Child With X-Ray Eyes

From the Medical Searchlight

A miracle of Nature, which has called for the greatest attention and surprise in professional and lay circles all over Europe, has been brought before the public by Dr. Pedro Niel, an oculist in Madrid, Spain.

Dr. Niel has been treating and observing the child in question for the last two years, and recently held a lecture in Paris before a great number of doctors who were greatly astonished by his communications.

The child is called Benito Paz. The father did not notice anything extraordinary about his child up to the fifth year. When he began to teach the A B C to the little chap he noted the ability of the child, who had just acquired the knowledge of letters and spelling.

to see through the closed book and spell out the words on the different pages.

The father at first suspected that the child was gifted with an exceptional memory, and was glad to have such an offspring in his family, but this belief was rudely shattered. He was looking for a button that was missing on his coat and the little chap laughingly declared that the missing button was in the cigarette case. Then the father remembered that he put the button in the cigarette case the day before, but how did the child know that? Cross-examined, the boy declared that he could see through the cigarette case.

The father then placed a number of cigarettes in the case, closed the same, and asked the boy to count them. Each time the child was able to give the correct number of the cigarettes.

One month later the father went to Madrid and called on Dr. Niel, relating to him all the previous circumstances connected with the child. The doctor examined the eyes of the child, but could see nothing unusual with them.

He arranged with the father to leave the child at his house for the purpose of a careful and scientific examination, to which the father consented.

He found that the boy was able to read letters enclosed in three or four envelopes, to read books through the bound covers, to tell the contents of a metal-box and even to tell the color of different items enclosed therein, as well as accurately describe the contents of the doctor's pockets.

That this is not a clairvoyance but actual seeing ability, is demonstrated by the fact that the child can see through metal, paper and cloth, but is unable to see through wood, which effectively stops the penetrating rays of the eyes.

The scientists are absolutely unable to explain this power of penetration and are puzzled to find an explanation.

Editor's Note: Back to fig leaves now.

"Peaks and Pokes" Lecture Hints

The following excerpts from a recent copy of "Peaks and Pokes" merit reading. Here are a few odds and ends picked out of books on speaking before an audience:

"The eye is the most eloquent part of the speaker. It gets the attention and holds it. Looking at the floor or the ceiling or out of the window, anywhere—except into the faces of your audience is fatal."

"Listen attentively to the other speakers if there are any."

"Before small and intimate groups, begin without any salutation."

"Do not begin by talking about yourself in either apology or explanation."

"A sagging at the knees or hip or shoulders does not carry conviction. Straighten up, chest out, and feet close together and pointing out. But do not be rigid."

"Speak your first words slowly and distinctly."

"Rapid speech is liable to be indistinct and monotonous."

"And while the subject is up, an abomination to a speaker is the childish person in the audience who turns his head and stares when newcomers arrive or when some one drops something. There are quite a number of these unfortunates."

"Prolonging it a bit more, some persons in a small group, being addressed by a speaker, turn their faces away because they fear they might embarrass the speaker by looking intently at him. It distracts him when you don't. Look him straight in the eye, and you will help him immensely."—Frank Dunn, D.D.S., Cleveland, Ohio, in *The Catholic Columbian.*

Tale of Two Patches

A woman advertised for a man to work in her garden, and two men applied for the job. While she was interviewing them, she noticed her mother was making signs to her to choose the smaller.

When the women were alone, the daughter said: "Why did you signal me to choose the little man, mother? The other had a much better face."

"Face!" exclaimed the other. "When you pick a man to work in your garden, you want to go by his trousers. If they're patched on his knees, you want him; if they're patched on the seat, you don't."

You Said It, Boy

Dr. Reid: "Do you know what happens to little boys who use bad language when they play marbles?"

Boy: "Yes, sir; they grow up and play golf."

Larry Larimore wandered into the tennis tournament the other day and sat down on the bench.

"Whose game?" he asked.

A shy young thing sitting next to him looked up hopefully. "I am," she said.

Dear Editor: You seem to be something of an authority on the female of the species. I am very much interested to have your personal views on the recent statement that blondes have better dispositions than brunettes. Dr. Edwards.

Dear Jimmy: I lay no claim to being infallible in such matters, but it is my observation that neither blondes nor brunettes have an advantage in this respect. I know quite well a neighbor girl who has been both, and I didn't notice any difference.

When Love Is Young

Her kewpy lips are cherry red,
Her eyes are blue and sassy;
She may be dead inside the head,
But, oh boy, what a chassis!

Open Forum of the Des Moines O. & O. L. Convention

Evening Session, June 12, 1929

DR. J. D. EDWARDS, *Presiding.*

On the platform: Drs. J. D. Edwards, T. J. Ruddy, Chas. M. LaRue, L. S. Larimore, J. M. Watters, E. C. Brann, C. Paul Snyder, T. H. Hedgepath, and C. C. Reid.

Dr. Edwards: This is an open forum. It is your meeting. You can ask any questions you like. You can talk shop all you wish. Don't be afraid to ask questions. Don't be embarrassed. Let's make it a good open meeting. There are a lot of things you would like to get off your mind. Now is the time. Get out your list and we will try to help you.

Dr. Baughman, Burlington, Iowa: The question that I asked this afternoon, I want to repeat, and that is this: I have an impacted, external meatus of the ear that is filled with pus, temperature 101°. I want to know the treatment after removing the wax and what treatment to follow-up in case the ear resists and continues forming wax and pus. The last time I removed as much as a teaspoonful and used warm water with glycothymoline to soften it and wash it out and after I had done that, I used fifty per cent solution of alcohol to dissolve what was left. I want to know if I followed the right method. What method would be the best?

Dr. Edwards: I shall ask Dr. Snyder to discuss that.

Dr. C. Paul Snyder: I understand, Doctor, this is the second or third attack?

Dr. Baughman: This is the first time it came to me.

Dr. Snyder: Does the patient have a history of having had a discharge before?

Dr. Baughman: Not anything that I have, no. Not for this case.

Dr. Snyder: That is an unusual history, very common. It sounds a little like an open drum membrane with an external cerumenous condition that fills very quickly. It is after the patient gets over this attack I would watch to see that it didn't fill up. You see if the external canal fills up quickly with the wax and drum membrane is open, the only way you can do is to keep close tab on it and keep it cleaned out. Then you can take the wax out. If you watch it, then that procedure is all right. If it is already infected we just use soda water followed by alcohol. Your patient is running a high temperature now?

Dr. Baughman: No, was without temperature at the last but at first when he came to me.

Dr. Snyder: The way to dry that up, if the secretion is quite thick, is to use boric half strength and then wash it out with alcohol, first half strength and then build it up to almost absolute alcohol, and it should dry up, well, within a week. If it ap-

proaches three weeks, we consider it a chronic ear and should have an involved mastoid. Anything that does not end well of that type, we call mastoiditis. Your treatment has been all right, but I would after that watch to see that the drum membrane closes. That type of case is one that is constantly being re-infected. (I cannot see why the cerumen, if the cerumen was bad enough to press in on the drum membrane—he must have had an open drum membrane.)

Does that answer the question?

Dr. Baughman: Well, yes.

Dr. Edwards: Did you see perforations in the drum head?

Dr. Baughman: Yes.

Dr. Edwards: Patients having impacted cerumen come back and come back. It is due to the eustachian canal or bad tonsils and a good canal treatment to check that excessive activity of the ceruminous glands is to paint the canal three times a week with tincture of Benjamin's Compound.

Dr. Reid: Hard wax or inspissated cerumen and chronic running ears seem to be the trouble in this case. The first thing to do is to get rid of the accumulation of impacted wax. This indicates disease of the cerumenous glands. In order to handle well in this treatment one or two points are essential. The rule should be, that hard wax should not be picked out by an attempt to use a spud or hook. It is almost impossible not to hurt the ear. The wax is glued to the external auditory canal and hairs so that it is very difficult to dislodge it without great pain. I have seen doctors many times attempt to get hard wax out of the ear by this method. Sometimes they succeed, but often they would have the ear bleeding and the patient very much in pain. They usually fail to clear out the wax completely.

Our method is to give the patient a two dram bottle of glycerin and have him drop 10 drops in the ear four or five times a day and come back the next day. The wax is usually soft and disintegrated to some extent. We use an all mtal, two ounce syringe. We use plain warm water to wash the ear. Usually the wax will come out in small portions with some larger pieces. By this method, success is assured in most cases, with no harm to the ear and no harm to the patient. We frequently massage the external auditory canal, after clearing of the wax, with 25% Boro-glyceride or Oil of Cade.

As for running ears, a chronic, suppurative, Otitis Media will usually clear up under the following treatment unless there is bony necrosis. Dry clean the ear with cotton tipped applicators thoroly. Pour into ear enough pure Ether to fill it. Let this dissolve away. It is so volatile that it will be gone in a few minutes. Now drop in ear 10 drops of Formalin Solution. The Formalin is made by putting 5 drops of Formaldehyde to an ounce of distilled water. Give the patient a small bottle of Ether and have him fill the ear with it three times a day until pus is practically gone, then once a day until it disappears. Have him come to the office every day for the Formalin drops and Osteopathic Treatment of the neck and upper dorsal region.

Clean naso-pharynx thoroughly with finger surgery and finger

technique. Take out all adhesions in the Fossa Rosemiller and all lymphoid vegetations. Go in the naso-pharynx and stretch the tissues in all directions two or three times a week along with the neck treatment. This combination of antiseptics and Osteopathic treatment will clear most all running ears in a short time. If there should be pus appearing deep in the middle ear, peroxide might be used once a day by the doctor before using the Formalin. The peroxide should be cleaned out thoroughly with a cotton applicator after it has been poured into the ear. Another solution which supplements the Formalin solution and may be alternated with it, is Calot's solution. Its ingredients are as follows:

℞	Guiacol	gm	00025
	Creosote		1 5
	Iodoform		3
	Ether		8 5
	Olive Oil		qs. 1 oz.

After cleaning the ear, drop in Calot's solution and follow every day for four or five days. Then dry clean and use Boric Acid powder.

Dr. Edwards: There is another angle we haven't considered in extracting foreign bodies and that is the medico-legal angle. It is very important. When a patient comes to your office with an ear full of wax, or an impacted cerumen, make a functional test as before extracting a foreign body. Be sure to make a functional test, because the foreign body may close the perforations of the drum head and you remove a foreign body you make your patient worse. That foreign body may take up the whole space. The moral is, don't promise. There have been some very interesting cases in St. Louis of gentlemen—I don't mean the osteopaths, but the medical men, trying to take out impacted cerumen and injuring the canal. And then another thing, in removing impacted cerumen, you might incite a brain paresis and open up follicles and get an infection in any follicle and you might have a secondary furunculosis and the moral is then, after you remove the wax, and fill the canal with bichloride of mercury, one or two thousand and let it go a minute or two and then let it drain out and put a little oil in. If you let the wax pack up that way, you get an open follicle and your bacteria get in there, so be sure to clean the canal with a bath of bichloride of mercury. That is the technic of Washington University. They tell all their seniors never to remove a foreign body without turning the head to one side and fill the canal with bichloride of mercury, one to two thousand and let it soak a minute. That cleanses the extremities and prevents a secondary furunculosis.

Their technic for taking out impacted cerumen is to take a small chisel and make a chink in the wax on one side and work back slowly in this chink and then take a very fine spray of oil and spray between that and the foreign body and it is very neatly done. You make a chink on or along side of the wax and work back slowly and take that fine spray, a DeVilbiss spray in that chink and fill the canal in back of that with oil and your wax shoots right out. And then fill the

canal with bichloride of mercury and close the follicles, and C. M. P. oil or phenol oil and you won't have stenosis of the canal. I have seen some pretty bad ears that have been treated in that way and they go on their way and in two or three days the ear is cleared up and you can't pass an applicator past the secondary furunculosis.

All right enough on that, any more other questions? Anything else along that line?

Dr. H. R. Berston, St. Paul, Minn.: In a case of Bell's palsy, what is the treatment for the eye where the eye remains open?

Dr. Brann: My experience has been with those cases if you give them plenty of time they will all—nearly all clear up. Some of them, you have to consider how extensive a destruction you have of the nerve. At the present time I have a case I don't think ever will close due to destruction by so much necrosis of the bone that the nerve is entirely destroyed, and I find that a majority of these cases you give them a reasonable length of time, with good osteopathic treatment and surgical treatment and they will practically all clear up—or probably it would be—well I don't know of any other treatment you could use on that hardly. Some of these other men can probably give you more of that than I can.

Dr. Edwards: Dr. Ruddy the treatment of eye symptoms in Bell's palsy, where the eye remains open. Please.

Dr. Ruddy: Eye symptoms in Bell's palsy are first, lid inefficiency and second, a possible development of corneal and conjunctival pathology, because of the loss of the lid reflex. The patient is anxious for restoration of lid movement. What you as occulists are concerned in is to avoid the development of conjunctivitis or ulceration of the cornea due to the absence of lid movement.

The treatment for the first symptom or the first pathology is very simple. The parts if given half a chance will restore themselves which means that the orbicularis palpebrarum and the occipitofrontalis will resume their normal functioning. There are two things to do. In the early stages of irritation the infra red and osteopathic manipulations are sufficient. After three weeks of the infra red and osteopathic adjustment of the neck and facial tissues apply the sinusoidal wave placing the passive pole over the seventh nerve and the active pole over any indifferent point daily for two or three weeks. During that time osteopathic treatment should be continued and in six weeks in the average case of Bell's palsy the lids will be restored to normal function. In the meantime, the patient should be cautioned against permitting the cornea to become dry. The use of lubrication is the best obviate that we know. The cream ointments No. 25 M. E. S. Co., which is five percent boric, placed in the eye daily and at night strapping down the lid so that the eye will remain closed, otherwise excoriations will occur with possible ulceration. Antiseptic washes as S. T. 37 in 25% strength. Boric acid is quite as good in many instances. That is the only treatment that you need. It is the only treatment I employ.

Dr. Jas. E. Gray, Newton, Iowa: Do you mean galvanic sinusoidal?

Dr. Ruddy: No, I use surging sinusoidal. There is a big dif-

ference between the sinusoidal and the galvanic, and the former is very beneficial and is less painful than the surging galvanic.

Dr. Gray: Then there would be no polarity.

Dr. Ruddy: Correct. But in placing the passive pole over the seventh near the ear and the active pole along the nerve terminals we get better results than if we put the active pole over the seventh trunk. If the active pole is placed over the trunk some patients will complain of pain, and they will not complain of pain if you place the passive one over it.

Dr. Gray: Dr. Ruddy, give us a little further help.

Dr. Ruddy: We should guard ourselves just a little in approaching a herpetic pathology in the eye on account of its progressive character. There is a vascular change in the ganglion of the nerve involved. It has been proven in 47% or about one-half of the instances of this disease. Omitting any direct knowledge of the inflammation of the ganglion I would not hesitate to look for the cause of the terminal pathology there, that is of the herpes zoster of the conjunctiva, whether you call it ophthalmicus or not. If it is on the cornea it is herpes zoster of the cornea; if on the lip, fever sores; and those of us who have treated and are familiar with herpes zoster of the cheek, herpes zoster facialis, herpes zoster labialis, herpes zoster nasalis, can apply the same general knowledge when we are dealing with the eye.

Dr. V. B. Taylor, Victoria, B. Columbia: In the treatment of herpes zoster ophthalmicus as a basis of iritis, followed by treatment or a preventative treatment for the prevention of glaucoma and possible iritis.

Dr. Larimore: Having had very little experience in the case the doctor speaks of, the fact of the matter is, I have only seen one or two cases in my experience. He asks about the relation of glaucoma. I cannot see there would be any relation to glaucoma. Of course any irritation to the eye would be more apt to cause keratitis than it would iritis and most cases of iritis come from focal infection or absorption of toxins, in other words. Do you mean trachoma or glaucoma?

Dr. Gray: I mean glaucoma. My text gives that as a possible complication. I would rather think the relation would be more symptomatic than direct relation. Another thing you must bear in mind, Doctor, that there is irritation over all parts of the seventh nerve to the end and would be more pathological causes therein of iritis and glaucoma, than to direct irritation about the eye itself.

Herpes zoster of the cornea results in the formation of an opacity in every instance. Follow the choroidal nerves, some three hundred in number, from the posterior portion of the eye to their distribution at the apex of the cornea with as many lymphatic channels of the cornea propria, forming a sort of a tentpole arrangement at the apex of the cornea. These nerves undergo an inflammation—a neuritis, whether the cause is in the ganglion or along the course of the nerve, but while it is true that in all probability the ganglion

shows certain vascular changes I am not ready to say that this is any different than it is in an instance of canker sore of the mouth. Similar changes in the ciliary bodynerves may reasonably be expected to disturb its secretary function leading to glaucoma. If you have read Osler you found and have been impressed with the idea that a neuritis with ulcers of the stomach has its counterpart in the "dropping out" or ulcers of the cornea. Gastric ulcer is different in no way from that of a corneal ulcer of herpetic origin. How could it be possible to have an inclusive etiology, unless you take in the entire body in the product of every cell and by-product of every morsel of food, of every thought entertained, but in the handling of the complications or the prevention of complications, we have or should encounter no difficulty.

As stated to the post-graduate class this noon at the college, when one is confronted with a condition of this kind, or any pathology in which you are not familiar with every detail, you should try to clear up the pathology. It is easy for you to stop, and, you are doing the patient a wrong, doing the profession harm and yourself an injury, when you fail to consult one who knows. We have these in the dozens and I presume that when I left the general hospital we had six or eight at least of these patients and I have to see the first one that did not result in a permanent deformity of the cornea with partial blindness, regardless of what was done.

Dr. Burl D. Elliott, Oskaloosa, Iowa: A case following a tonsillectomy, probably two or three months afterwards the patient complained of not talking plain. The throat bad, and at first only noticing a little thickening of the voice, but becoming more emphasized. What is the cause of that? Prognosis and treatment. Pillars are intact and uvula mid-line erect.

Dr. LaRue: I would like to understand the question just a little better, Doctor. If I heard it right, this is following a tonsillectomy two months?

Dr. Elliott: Two or three months.

Dr. La Rue: Do you know whether she will talk along in a normal voice and then voice weakens?

Dr. Elliott: Talks all right but loses her voice.

Dr. La Rue: There are a number of such conditions observed following tonsillectomy. I only recall of one having followed the type of tonsillectomy I am most familiar with, but those that have come under my observation have been chiefly following the ordinary type of tonsillectomy. A close inspection of such a throat very frequently reveals a general field of scar tissue, usually almost a complete, if not a complete absence of the anterior and perhaps the posterior pillar.

If we are to discuss a particular case, we must know these features and you can readily see how great trauma produced by poor surgery in the throat could affect the voice by binding together the muscles that should be left intact covered by mucous membrane instead of scar tissue. I have seen side walls that were bound tight to the sty-

loid process. You have seen cases in which the uvula had been entirely removed and perhaps half of the pillars. It would not be unreasonable to expect the voice would be impaired from such a type of tonsillectomy.

But now if we are to consider a voice impairment following good surgery, pillars left intact, fauces normal, no restriction or amount of adhesions then that type of case we must consider as a neurosis and we cannot make a general rule, it must be treated as such. I can readily conceive of a chronic laryngitis having followed a tonsillectomy of certain types. It is likely if little trauma has been done and the surgery has been first class, that the voice is affected from other causes than the operation. It might be exaggerated by the operation, but a dripping of pus constantly down the throat from a suppurative sphenoiditis and posterior ethmoid sinusitis can set up an inflammation of the mucous membrane over the vocal cords and can thicken the vocal cords, causing the voice to tire very readily.

The treatment necessary in the type that is followed by a tremendous scar tissue formation may be simple and it may not. Under proper stretching finger treatment, it may be possible to loosen up the tissues to stretch the fibrous bands that have formed until there is free muscular activities, assuming that there is no neurosis, but it is merely due to binding down of the tissues. I would advise finger treatment as far down as one can reach with the index finger, covered with a sterile finger cot for two reasons, cleanliness and prevention of trauma, our object being to loosen up the adhesive bands. If it is a neurosis, we must treat it as such.

I would still advise in that instance, using the finger treatment in the throat and would use osteopathic treatment and the infra red ray. The heat is good for stimulation of circulation. There may be some other special treatments that others can suggest that would be of advantage, but those I would recommend thoroughly. Cervical treatment.

For the type that is due to neurosis the prognosis is good, but the time will be drawn out. I have seen some four or five cases the past winter. Some who have not had their tonsils removed and yet had voice impairment following the flu. That is the neurosis type, but for an ultimate result the prognosis is good, yet it will be a drawn out affair over quite a period of time and then for the type due to the constant dripping of pus from the sinus, the prognosis is also good and the treatment of course is to clean up the source of the irritating secretion and intercept the secretion as it goes down the throat and also with the osteopathic treatment. Doctor, did you examine the pillars?

Dr. Elliott: I don't remember. The pillars are nicely intact.

Dr. Edwards: In the root structures?

Dr. Elliott: I think she has some laryngitis, probably had a little nasal dripping.

Dr. Edwards: All right, are you satisfied?

Dr. Edwards: You passed your finger down the larynx?

Dr. Elliott: Yes, I pulled the tongue forward. I used Dr. Ruddy's technic and pulled the tongue forward.

Dr. Ruddy: I have seen varicosities of the larynx associated with post nasal pus "drips" and infected tonsils. I would advise to check the sinuses and make a survey of the head for focal infection, tipped hyoid bone and calcareous deposits.

We have tried to improve upon tonsil removal in the past ten or twelve years for the purpose of giving the patient a cleaner throat and a more nearly normal throat than has been given the patient by many of our medical brethren. We have endeavored to depart from the so-called classic way of doing things as described by text books and in doing so have felt that we have left the throat in a better condition. If we are going to assure the patient with our method, that we have better after-results, avoiding disturbance of the voice, the technic of the surgery is the first and most important, as Dr. La Rue has stated. Second, the "after treatment," for a neglect-neurosis is most troublesome whether due to a local condition or to a more remote condition.

I find after the nasal symptoms are removed, all calcareous deposits corrected, removal of all of the tonsil and lingual tonsil and the "after adjustment" has been done that few instances of motor sensory or secretary neuroses develop.

An automobile that has run into a fruit stand has caused a wreck. The automobile may be backed out and sent on its way, and so with good tonsil surgery, even with good post operative treatment, followed up with good cleanup methods, removal of local pathology, we still may have an impacted wisdom tooth that will reflex an irritation or neurosis. You will often needs look to the stomach and to the sigmoid for the cause of the post operative pharyngeal neurosis, and I am not so sure but what you should go as far as the sacro-iliac for a cause of that neurosis, however local finger "after treatment" will prevent a great majority of these functional disturbances. In managing the post or "after treatment," which is one of the points which we stress, instruction is given to the patient to begin three days after the operation, drawing the tongue forward, right and left; forward, right and left; forward, right and left, or three times three, three times a day for three weeks after the operation. Then see the patient each week for three weeks, drawing the tongue well forward, then drop the finger into the laryngo-pharynx, stretch the wall to the right three times, to the left three times—never in an irregular way, but always with the same specific procedure—and I believe you will protect in most instances against varicosities, voice impairment and other dysfunctions.

Dr. Edwards: In other words, be a good student of neurology. Anyone else?

Dr. G. B. Atkinson, Vancouver, British Columbia: I have gotten a great deal lately on the subject of electric treatment, or electro-coagulation and electro-desication and from what I have read it seems to me that the two types of treatment are confused. I would like to

have them compared and some of the results that have been gained given to us.

Dr. C. Paul Snyder: The reason I became interested in electro-coagulation, I have been reading it for several years. I had seen some bad work down with the electro-coagulation, with the needle, unsatisfactory, in the last four or five years. I have been watching the treatment by men who are rather bold to do things I would not attempt to do with it and at Jefferson the last year and Philadelphia and it is a large allopathic school, the largest in the country. They spent all Thursday afternoon taking out tonsils by means of a snare. That is another thing that drew my attention to it. Dr. —— of Pittsburgh and —— of Philadelphia take them out by that method. As you know, he is a sinus man and the oldest professor at the Polyclinic. That drew my attention to it and I have started watching them give the treatment. Anyway I got a machine at the time Dr. Ruddy and some of the boys were in Philadelphia for special work we studied it as best we could and I use it in this way. For instance it is very valuable to me in several cases and I will mention the type of case I use it. Well I take it—I have in mind where it is at the external canal—that is not tonsil work, but in two of the cases they have been cut out before and each of them were very painful and in each of these types it is very easy to do them.

I had an old lady eighty-four and she happened to be of a very prominent family. She came to me about four years ago with complete deafness. She had no bone conduction. I couldn't see any reason for treating her, it didn't seem so to me and so I tried to please her and I told her I would get a trained nurse for her. The nurse said she coudn't hear and won't you do something for her, give her some attention and do something, and treat her. We had some success and she got so she could hear up to five or ten feet. To make a long story short in her right tonsil she had an abscess which had drawn until she had flu a couple of times this winter and I couldn't get it clear. With the electro-coagulation I use the Fischer Machine and I have been able to absolutely dry that up and have given her a normal throat so far as I can see. They would not consider anything in the nature of cutting at her age and all that sort of thing and I just made two applications with the broad spark and by the way, it is a dangerous modality in the hands of a person who is not able to do a tonsillectomy. I believe you should be able to do indirect work in the throat before you handle this modality.

I will mention two other cases where there has been very full recovery, in one 74 and one 75, women who really had a very bad pus situation by which by gradual method we are able to give them an absolutely satisfactory throat. We are getting a complete removal, but I cannot see the method they are using at Sciller, in Philadelphia, and the throat seemed to be all for nothing by the regular method, but they were old people and people who in order, to take the treatment or removal, you have to get rid of them. One patient had been sick three months this winter. The old lady seventy-five we gave her a very nice clear throat.

Another one I have in mind as a very satisfactory case is a nurse who had had three operations and they happened to have been done by friends of mine who are prominent in the homeopathic hospital. She had had a hemorrhage and a great deal of fibrous tissue, I cannot understand such a type, but anyway she had a large mass of fibroid and it is not exaggerating to say that it took in two fingers and pressing pus up underneath in each ear. She had had quinsy attacks three or four times and it was rather mild, but would break and run down. Two applications—a single mild application on the throat fibrosis and the mass opened out and we drew it up in the lymphoid tissue in an easy manner.

Now I have never had so much experience in the hypertrophic tonsils in younger people, it appears so much in that type of cases. After I have had more experience, I will know more about it, but in the case of older people it has been very valuable to me. For instance, it well paid for itself in the one old lady. Now as to the technic, there is a machine here and we have been asked to have a demonstrator—the method I use I would not be able to finish a case even though I had one, while I was here. So there is that objection to it. I have really nothing to say, unless there are some questions on the method of applying the treatment.

Dr. Edwards: Dr. Magoon, let's hear from you.

Dr. Eva W. Magoon, Providence, R. I.: Mr. Chairman, I have done some of the hypertrophic tonsils in the case of younger people who are in school and whose parents have a dread of the knife and who have had very little symptoms up until the time they came to me for the work on the throat. The particular case I have in mind was a case of adolescence and the parents did not want the child subjected to surgical shock. She was just entering high school and we have gotten very good results on the hypertrophic type. Have you any special type that you want to discuss other than that?

Dr. Atkinson: What I had in mind was more of a comparison of the coagulation and the desiccation methods. I started out on the desiccation and I changed entirely to the coagulation. That is my experience work. I didn't have the desiccation method very long in practice before I determined that the coagulation was far superior and and we are using it entirely in the office at the present time.

Dr. Edwards: Let's have some thing further on that. Anyone on coagulation and desiccation of the tonsils.

Dr. H. L. Landis, Elkhart, Ind.: The question I want to ask you was whether you recommend it in the case of bleeders, and my reason for asking is that in a neighboring town a man was going strong with electro-coagulation and I saw one case and I was thoroughly familiar with the case over a period of years, large spongy tonsils and after he had been treated some three times, I believe, the tonsils were not any smaller at all, but they gave the appearance of having been slotted in definite deep fissures clear through them on both sides was two deep fissures to each tonsil.

In about two weeks after that they discovered after he had seen that case, he had a case—and this is a brother osteopath, too, by the

way, in which the patient hemorrhaged to death. I understand he has quit using it. Was that necessarily a bleeder or was it faulty technic?

Dr. Snyder: It is a dangerous procedure in the hands of the unskilled. A case of coagulation is taken and we use the thyroclax, put up by Mr. Ford, No. 1. As the calcium thyroid and parathyroid which is the No. 2, as the calcium thyroid and you have to bring the coagulation up to a reasonable state I mean to say. That is one indication or one reason why. For instance, in Philadelphia, the one I have been observing is Dr. Sciller, and that is where he uses it in cases where it cannot cause coagulation and should be a safe procedure. I have had two hemorrhages follow it, one was the fibrosis case which was seven days later. It was controlled by ether and just two tablets. It seems to be in the blood. One was a fistula. It was an old case of fistula running up hill and there I coagulated deeper than normal. Everything looked very nice, but the week after the throat seemed to be terribly engorged and this slight hemorrhage which lasted less than half an hour and I used ether and two tablets to control it. I would say it was really a very dangerous procedure. I have observed it for several years. I went up in the country and saw two or three operations and he was using 20% cocaine and taking a swab and enough to drown the average patient. That is about the technic and it was just lucky he didn't get a sloughing into very dangerous tissue. I think it can be safely used. I don't see why it cannot, after using it for ten years I will tell you more about it.

Dr. Edwards: Dr. Davis.

Dr. Warren Davis, Long Beach, Calif.: I think that ought to be emphasized, what Dr. Snyder has said. I have done some of this work, but more of it not on the tonsils, but on the uterus. But I use it very carefully, simply in the experimental stage. I know of course, how these Fischer men and these people who sell these electrical apparatus would have you think that all you have to do is to give it a little coagulation and pull the tonsil out and take fifty dollars and that is all there is to it. I hope that the osteopathic profession will let men like Dr. Snyder and Dr. Reid experiment and then tell us what to do.

Dr. Walter G. Shay, Sturgis, Michigan: I would just like to say I had a little fear cast into me by attending the Amerian Society for Electro-Therapeutics and Etiology at Washington year before last, to hear those real electro-therapeutics talk about it. (Laughter)

A man who had been doing that work for twenty-five or thirty years had the practice in different parts of the world, to hear them talk of their mistakes. I just want to offer this suggestion to those who are doing the coagulation and the desiccation. In doing electro-coagulation of course that is the best method, but in doing that, when you have your tonsil almost destroyed and have a small portion left, then drop that off and go back to your desiccation. You will find that much better, because much easier under your control and there is no danger of destroying a pillar. Now as I got from these fellows there in Washington, their trouble was, they would thrust the needle too far in the tonsil and would desiccate too deeply and burn. The

scar from the burn was worse than from the knife, and it was the after effects that gave the great trouble and a suggestion for those doing desiccation and coagulation, after you make two or three applications of the coagulation and a little bit left, then go very slow about using your desiccation.

Dr. Magoon: Mr. Chairman, why isn't it possible to do that in bleeders, go very slowly and make the application in very, very small quantities, not over a rapid period. You don't need to do it in one, two or three weeks, give them plenty of time and I keep all my cases under observation for one, two and three years.

Dr. Snyder: In common practice like mine, I have been in practice twenty years—not very long, when you consider some of these gentlemen, of course, Dr. Ruddy, but you actually accumulate a lot of cases that won't—I mean they won't stand for any surgical procedure and even burning the tonsils won't clear it up. Some of them have brilliant results in getting ready a focal point. It all resolves itself into safety procedure. It can be done, I am convinced of that, but after you have observed the pillars in the throat, you can—you take at least two or three years to really know what—how that throat is going to act, but it can be done. Infection can be safely blamed for neuritis and lots of times the records and tests show that. I have done some thirty-five to thirty-eight cases of a type that I have accumulated for years in my practice and in my brother's practice, there are three of us, or were before his death, and most of them are chronics, that I couldn't get clean in any other way. It has a valuable place, even if it is never used again. It has paid for itself a thousand times over in clearing those infected spots in cases I could not reach in any other way. All of you have cases that won't be operated.

Dr. Baughman: In comparing any surgical methods as in all around procedure in tonsillectomy with the coagulation—with the desiccation method, doesn't it stand about ten to one in favor of surgery and if it is, wouldn't that be the safe and sane procedure?

Dr. Reid: Electro-desiccation is the use of the electric needle which dries the tissues. It is a dehydration method. Some doctors use that as preference in the removal of tonsils. I have had limited experience with the coagulation of tonsils. Under desiccation, when they put the tissues under the microscope, they find the cells still intact but shrunken. Under coagulation, the cells are broken down.

As far as my experience has gone with electric coagulation, it is a good method for us if the technique is properly handled. Without proper technique good results could not be expected no more than it could under surgical operation. Care should be used in introducing the needle not to get it into the muscles of the throat or into the capsule of the tonsil. By keeping it in the tonsil tissue only, and keeping the current on only one-half to two seconds at each point, only tissue will be destroyed that it is desirable to destroy. The process must be repeated two or three times on each tonsil, two weeks apart. The method is not used to take the place of the operation by most doctors who are using it, but just in specially selected cases, such as: Diabetes, Bright's Disease, Tuberculosis, Syphilis, very old

people, and some whose economic condition is such that they must not stop work. The tonsils can be removed by this electric coagulation by using the proper technique so that the patient can continue his daily vocation.

Dr. Reid: I wrote many M. D.'s and others for pro and con on Electro-Surgery of the tonsil, but so far nothing "con" has been received. My own experience has been limited to observing the scar-ruined throats of those who had been victimized and to a few patients on whom I employed fulgeration or coagulation or Electro-Surgery enucleation of infected remnants not due to the La Rue-Ruddy symphony. I was cautious. In one instance a nurse, 26 years old, clotting time three and one-half minutes, I fulgerated a piece about one-fourth inch in diameter. The throat was sore for two weeks—she said "worse than the original operation." She bled profusely the following day, requiring heroic measures, and, again five days later a second hemorrhage which ceased on the use of transfusion. She was bedfast for twenty-two days. Another instance, a man fifty-four I enucleated (E-S) a lower pole. This was pretty and required less than two minutes. No bleeding but a slough, that did not leave for more than a month, ensued and the scar has produced a sensory neurosis that I have not been able to correct after seven months' weekly stretching treatments. Many others, perhaps about forty-five, but only three that healed as well and as uneventful as had I used straight surgery. Am I sold?

Dr. F. A. Engelhart, Oklahoma City: I have a little girl two and a half years old, taking care of her for hypertrophied tonsils. She has very great difficulty in breathing at night. I treated her about two or three weeks before I came up here. She is very much better, but is still having trouble. I would like to know the best methods to use for that.

Dr. Edwards: Dr. La Rue?

Dr. La Rue: That is largely a matter of personal opinion. The child has both hypertrophied tonsils and adenoids. Some would say remove the adenoids, of course it is surgical, but the question is, to what extent will you go with surgery. I have long since passed the point of removing adenoids and leaving tonsils. It is a matter of repetition if you do. There is no reason why we should let badly diseased and hypertrophied adenoids and tonsils remain in a child two and a half years old. Although tonsils have a function, if normal, this type is not performing its function. They are doing worse than that. They are diseasing the cervical lymphatics, throwing out poison through the system. The child's body is not normal size, the child is perhaps not normal in weight, the mentality is not developed. It is not getting oxygen into the blood, it is not throwing off the proper amount of carbon dioxide, the transfusion of gases is not taking place in the lungs in a normal way because of the fact that it is not getting sufficient warm moistened air into the lungs. There is no reason why if the child is physically able to stand a little more anesthetic that an adenoidectomy and tonsillectomy should not be done, and if done in three or four weeks there will be marked benefit.

If you do an adenoidectomy you will only remove a part of the obstruction to respiration. You are only removing a part of the source of toxemia. You are leaving the child liable to almost certain future operation. You couldn't use coagulation very conveniently in a child of that size. Consequently it resolves itself into an adenoidectomy and tonsillectomy and there is no reason why it should not be done.

I have operated a lot of children, two and two and a half years old, and the results have always been very rapid and ready relief from the lack of appetite, lack of pep, of the anemic condition. There is no reason why that cannot be done under proper technic. It only takes just a little anesthetic for a child of that size. You can put them down under ether, starting them with gas without frightening them, put them down under gas until they have lost consciousness, give them a little ether and then you can remove the tonsils and adenoids without hemorrhage and without leaving a portion in two or two and a half minutes and the child is awake in an hour and running around in a couple more. The next day you would not know anything has been done. You couldn't recognize it by seeing the child play.

Dr. W. J. Siemans, Seattle, Wash.: In the treatment of a case that I have termed coronoid dermatitis of the nasal vestibule. I used various ointments and the last thing I used was a one per cent yellow oxide of mercury and that gave the most relief. It seemed like mineral water. I expect he may have some sinus infection, but I cannot find any reason for the inflammation at all.

Dr. Edwards: Examine him for sugar.

Dr. Larimore: I believe I talked to the doctor about this case. I think his yellow oxide of mercury is very fair as a palliative condition and perhaps Lassar's paste might be of benefit there. I think the only way to cause you to be absolutely sure in some basic sinus condition or some focal condition.

You suggest blood sugar permanganate. One case where I had deep infection or one fails to allay even following surgery and especially is that true in folks over-weight. But it might indicate that you are apt to find high blood sugar even though you don't find sugar in the urine. Some of us can be so wrong that we are not able to clear up the case and practically the only line of treatment to base it on was the blood sugar and then clear it up, after they find it exceptionally high. Have you had this sinus X-rayed?

Dr. Siemans: Yes, sir.

Dr. Larimore: Does he generally have a moist nose?

Dr. Siemans: No.

Dr. Snyder: Is this on the lateral wall?

Dr. Siemans: Just on the outer edge and just inside the nasal vestibule.

Dr. Snyder: All the way around?

Dr. Siemans: Yes, sir; both sides.

Dr. Larimore: Did you make a smear to find out what it was?

Dr. Edwards: You try compound tincture of benzoin.

Dr. Baughman: A minute ago this gentleman preceding the one just talking asked the question, how to treat those enlarged hypertrophied tonsils providing there was no operation. Now that question, it seems to me, was not answered properly. The question is, how to treat that case. The old doctor would tell us to use osteopathy if he were here. Now we as osteopaths would certainly look after the diet of that child and see how it has been fed. Has it been overfed, fed regularly. What has been the nature of the diet? Has the child had the proper nutritional elements involved in that type, in order that the growth of the child might be proper without too much accumulation of toxin in the system? There is an over toxic condition in that case, there is no question about it, or those tonsillar conditions would not exist as they are. You would be surprised at the feeding of the child on a one-fourth diet, one-fourth of the amount for three days and then give the regularly calculated amount for another two days and then three days again of the ordinary diet. You would be surprised at the amount of improvement in that case. I have had experience along that line and I believe I am right in it.

Dr. La Rue: I didn't answer the question, if that was it. What was the known surgical treatment? We don't find people who are dead set against an operation. We find them that want professional advice. They may have some ground for taking that position. I was assuming that the particular thing to be done in that instance was to operate; if not, then we must take some other course. Hypertrophy is an overgrowth, turgescence is the temporary enlargement and had it been described as such, we could readily give a treatment that would be immediately effective, but hypertrophy is the result of a long standing inflammation and in this particular type here, a low grade inflammation, you have an overgrowth of tissue. Perhaps you can reduce that in time. You can, but what may happen to the child in the meantime?

Dr. Baughman: Put him on a fasting diet and you have no trouble.

Dr. La Rue: Let diphtheria come along and you lose the child. You take a great responsibility by not urging your people—selling them the sensible thing, the protection to their child. It has only failed in one instance and in that instance the child died the following winter of diphtheria. Simply closed its throat and it couldn't breathe. They used intubation and the mother's happiness was wrecked because she felt she was responsible for not taking the advice which would have saved the life of the child.

A child probably three, hypertrophy of the tonsil, — I am speaking of between the time when there is no active process, such as a cold or an extra inflammatory condition, and we see them often in children of that size, it takes diphtheria you are up against a very serious condition and often times death, because you have a hypertrophy, an acute swelling, and on top of that a false

membrane and death from suffocation. So I would do the proper thing and if that were impossible, tell them if they don't want to listen then we will do the thing their way at their risk. You will find it a mighty hard child to nourish.

Food and air are two different things, but they must go together to have metabolism and you can readily regulate your diet as you please, but if you cannot get oxygen into the hemoglobin of the blood and carbon dioxide out of the system, what good is food going to do? It is like pouring fuel on a smouldering fire. The child becomes anemic and susceptible to disease.

Now if I were forced to treat the child, I would do it under a protest. "I am doing the best I can undertaking the handicap you put on me and on your child. There is a quick way to relief and in a few weeks a strong healthy child, resistant to disease. On the other hand, we are going to attempt to treat this child and there is nothing better than diet, regular habits and osteopathic treatment." That is about all anyone can say. You can use gargles and swabs and one is just about as good as the other. You are placing it on the surface when the infection is in deep.

I have a child lying in my hospital right now following a forced, emergency mastoid operation, when, if a tonsillectomy had been done two weeks before, that child would have been saved this operation and many weeks in the hospital. We can't get the wound to heal and the amount of pus which has drained from it is astounding. The glands on both sides swollen out beyond the cheek and I didn't know whether I would attend this convention or not. I have been confidently looking for a mastoid to develop on the other side.

This doctor fifty-two miles from Columbus treated the child and he is as good an osteopath as there is in this room, but he treated the child too long. A simple surgical operation two weeks ago would have prevented a serious mastoid, with necrosis of the bone and general inflammation and infection around the ear to the extent that sutures would not hold. We sutured the periosteum and in four days the wound was wide open.

Four days after the operation, when the child would cry, bloody pus would run from its nose. What does that indicate? May indicate serious consequences but now she is improving. Three weeks following this operation a tonsillectomy was done and two weeks before would have prevented the whole thing. Had a blood count of 24,900 the afternoon we operated for mastoiditis, which immediately came down to about 19,200. Temperature 103.

We must be reasonable with a child of that age with tonsils such as described. In this particular case, we can treat them, yes, but you treat them as well as we specialists can. You may be specialists, but we have to lay aside a lot of specialty work and take up the old osteopathic treatment, go to work with it and why not use both. People are hard to convince, some of them, but when we tell them the truth and lay the responsibility at their door, say, "I cannot take the responsibility of this case." And you cannot, but if I were going to treat the case, I would treat it osteopathically. Perhaps

you can use finger treatment in the throat, perhaps you will get some results, but it will not be very effective in my opinion and eventually somebody will get those tonsils or the undertaker will probably get the child.

Dr. Baughman: The natural diet of a child is supposed to be milk up to a certain time, but after that time, what else do they eat? Fruit. Some sort of fruit. There is nothing that appeals to the child more than fruit; they love it and it agrees with them. You give them a meal or two of fruit, nothing else with it and just let them have that one thing. In fact the great trouble with our children, they get too many varieties at one time in their diet. If we have them on a regular diet of one thing for a while the child will learn to love that and it will live more effectively.

Dr. C. B. Ewing, Jefferson City, Mo.: I would like to hear a discussion, when is the chronic suppurative antrum—when is it ready for the radical stage and how do you determine whether this antrum is to be entered from the outside or going in on the inside? To what extent can an antrum be treated, a chronic suppurated antrum, or to what extent can you go, before you say that antrum can only be treated by an external opening?

Dr. Edwards: You mean when the external operation is indicated?

Dr. Ewing: Yes, how far can it go with the internal treatment?

Dr. Edwards: Well that depends on the findings as to the pus in that infection. You know in the treatment of an antrum, there are three kinds of pus, what is termed flacculent, soluble and granular. We know that this, that septsis in soft tissue will not X-ray. Septsis in bony tissue will X-ray. Therefore, septsis in bony—soft bony tissue will show a transmitted illumination, but I don't do a Caldwell Luc. I have been able to get by merely entering the nasal portion, making an opening on the anterior trap, large enough so that I can bathe the antrum with oleum phenol, three grains of phenol to one ounce of albolene. To treat an antrum like that, we use about three irrigations of the solution for study and observation to get started, but after three irrigations, we stop and then we go into our oil treatment. If they don't clear up in about a month's time, then I would say a Caldwell Luc is indicated, because you must have a little polypus in there and some indication of a bony septsis. Let it go a month with that treatment and if we cannot clear up the antrum, we advise a Caldwell Luc.

I have six of them right now, all of that type. Two of them never had trouble before.

Dr. Ewing: You extract from the maxilliary process and I promise you, you will find a fistula.

Dr. Edwards: Some of these have been X-rays, but from the X-ray technician, they were not good enough to work, but he just sent them back and reported, Chronic pus antrum.

Dr. Ruddy: When you think of pus and its cause, you must know that in some instances in which we have an exceedingly large

amount of pus that it may be due to saprophytic bacteria and not to the staphylococcus albus, diplobacillus, pneumococcus or staphylococcus aureus as virulent pathogenic growths in an empyema of the antrum, corresponding to Dr. Ewing's description.

Pus is evidence of something wrong, but not necessarily a pathogenic bacteria, and you may pay little or no attention to such a culture, but you must pay attention to the contents of the antrum. No individual has a chronic antrum discharge without a well defined cause in the form of a local irritant, polypoidal, edematoses, not necessarily a polypoidal mass but an edematosed membrane, that has become so chronic that the interstices or spaces in the membrane causes the membrane to bulge into the antral spaces, or later growing, possibly to fill the antrum.

Each year since 1924 I have been on the program to show you how the injection of lipiodol will disclose to you the presence of polyps or the presence of an edematoses. The lipoidol in the radiograph shows the bone and the membrane in degrees of opacity. The membrane stands between the lipiodol and the bone and you can see at once whether it is polypoidal or hyperplastic, and, as stated yesterday, the total removal of the mucous membrane from the antrum or other sinus is a treatment not to be approved if that membrane is performing normal function or can be restored to a normal function.

I believe that Dr. Edwards' general statement is correct. Treatment for a time with irrigation is a good thing. That is osteopathic, primarily. Surgery, when necessary, but only when necessary. I don't think Dr. Edwards is wholly wrong, of course. (Laughter.) I have said so many good things concerning his work, I can say there are a few exceptions, when he still continues at this day and age of advancement to run a trocar into the maxillary—not that it isn't a good thing and should be done in certain patients, but I believe with the average patient as described by Dr. Ewing the normal opening dilated, if necessary, using first a form of shrinking agent as ephedrin, then introduce the dilator in the ostium and increase its area. Teach the patient how to irrigate his own antrum without using an instrument. Most of you I presume have seen my slides on the screen the last three or four years and I need not go into detail here, but if there is a sufficient number desiring it, I will give a demonstration.

The ostia of the various sinuses are located in the walls of the cavities varying with the different groups. In the ethmoid and the sphenoid, the ostia are above the middle of those cavities and in the frontals the ostia of course are in the floor and the antrum's ostium near the roof. If you will place any one of those sinuses in a dependent position in relation to the lungs, then by inhaling efforts, the nose and mouth closed, you will remove the air from that sinus and any fluid in the nasal spaces will enter that sinus and occupy the vacuum thus created.

All you have to do is to know the anatomy, place the sinus you wish to irrigate in a dependent position and introduce the fluid into the nasal chamber adjacent to the ostium of the sinus to be irrigated. For example (page 21-10640), if I wish to introduce Alkalol, saline or boric acid solution in the antrum I place the sinus lower than the

lungs by lowering the head and the forehead two inches lower than the chin. Now introduce the fluid into the nose using my irrigator or a gravity system. After one side is full, say the left one, close the nares with the finger and thumb, close the mouth, and inhale or endeavor to inhale. In other words, exercise an inspiratory movement. Repeat five times in five seconds for 20 times breathing at the close of each five. In the average instance you have all of the air removed from the sinus and in its stead the aklalol or other solution you are using. By turning the face to the right you increase the solution in the left antrum. To empty the left antrum turn the face to the left and repeat the movement five times. To empty the frontal tip the head backward fifteen or twenty degrees, grasp the nose and close the mouth and exercise five inspiratory movements. The fluid is now removed from the frontal. If you wish to re-wash, repeat the positions. To irrigate the right antrum drop the head forward to a horizontal position, that is, face parallel with the floor, turn the head to the left side, fill the right nasal chamber. You should introduce 15 to 30 cc which fills the average nasal chamber. After introducing the solution close both nostrils, close the mouth and repeat the inspiratory movements for twenty times, in groups of five, so as to allow some time for breathing, and the right antrum is filled. As the individual rises to the erect position it will remain filled to the ostium only.

The antrum is now irrigated. Drop the head again, turn to the opposite side, close the nose with thumb and finger, the forehead a little lower than the chin and inspirate five to ten times and you will empty the right antrum. This you can prove wih the X-Ray.

After doing this irrigation over a period of a given length of time, say several months, in a simple chronic sinuitis, you have no place for surgical procedure. If your Lipiodol diagnosis has been made properly this is your method. You are not going to remove a large edematoses. You will not remove a mass or growth, for such is surgical from the beginning. There is a proper treatment in every pathology if you only but understand the pathology and the treatment, then you will not fail. Dr. Ewing's case we know is due for surgery right now. We are not going to encourage him in any futile effort, although I am strong for irrigation of a sinus and having the patient do so at home by the autovacuum method. It does the work. You don't need surgery! You don't need trocars! You don't need canuli. *There are cases that need surgery,* and if you removed the entire bone, you wouldn't go far enough.

Dr. Ewing: I might say this went along four months and I washed it out every two weeks and I couldn't see any perceptible decrease in the pus, the odor was just as bad, and I sent him home with orders to wash it out himself and gave him the proper equipment to do it and he returned in some time before, it was about four months ago and I don't think he is any better and he has had the phenol oil treatment for all of that time.

Dr. Edwards: Irrigation right along with it?

Dr. Ewing: Irrigation right along.

Dr. Edwards: That was a mistake.

Dr. Ewing: He was only irrigated the first two weeks.

Dr. Edwards: That was entirely too much.

Dr. Ewing: He had to, to get relief.

Dr. Edwards: Your oil will take care of it because it is clearing your walls. Three days for observation, that is enough to get them started. Go on using your oil. That is Sleuder's treatment, but you must stop the third day. An ounce of oil in the antrum, phenol oil, three grains to an ounce of albolene. Drop those in to get the sepsis in the soft tissue, because the calcium content is too low, but it will show in the trans-illumination. I can show you dozens of them where the X-ray shows nothing wrong with the antrum. The illumination would be slightly cloudy and you would get a little soluble pus. Your X-ray shows in the antrum because if the calcium content is high, you have sepsis. If you don't, your calcium content is low, but your mistake was in keeping up irrigation and using the oil treatment.

Dr. F. Cohen, Wichita, Kans.: What is the etiology of edematosed uvea and its treatment?

Dr. Larimore: Leave it alone and it usually takes care of itself. Usually it is due to edema in the soft tissues around the eye, the uveal tissues and the lymphatics outside. My experience has been in the average case, the treatment is very limited. Ordinarily it will take care of itself in two or three days. In some cases it is necessary to puncture it if it causes any obstruction to breathing as in a young child.

Dr. Foss: At what age do adenoids atrophy?

Dr. Brann: At the age of nineteen or twenty years of age they are supposed to be atrophied.

Dr. Edwards: You heard Dr. Hedgepeth's paper this afternoon on Anesthetics. Any questions you would like to ask the doctor on Anesthetics? This article on the ACE, I have been thinking that over and to my mind, it is good and I intend using it myself in my hospital.

Dr. N. J. Neilson, Toronto, Canada: Is there any danger in using ten per cent cocaine in the throat in limited quantities?

Dr. La Ruc: Yes, there is danger in using cocaine anywhere. There are people who have idiosyncrasies against cocaine and using cocaine in those few instances, you may get shock from the use of it in any strength. I don't believe strength has so much to do with it used externally. Some specialists use twenty per cent regularly. Some, a great many particularly of the medical profession, use it much stronger than that and evidently they don't get a terrible high percentage of shock or they would not use it. Personally I never use cocaine over four per cent. Perhaps ten per cent is used by a greater number of people than any other strength or approximately that. But it is well to restrict the use as much as possible, because you never know until it is too late when you are going to strike a person who has an idiosyncrasy. I had a case of rather severe shock using one-twelfth of one per cent hypodermically and had just barely begun to

inject. It took some three hours to bring the patient through. It looked for a time as if it might be fatal. After she had entirely recovered, she told me her sister died in Grant hospital as a result of shock from local anesthetic. I assume it was cocaine from what she said. Her information was late.

That is often the case and you never know. Cocaine is not alone in that respect. Butyn has been known to do the same thing under such circumstances. Most specialists have ceased to use butyn as an injection. They only use it on the surface. They have a great many fatalities from the injection of butyn. I have known of shock from procain. They have thought that is true of any local anesthetic. Cocaine is probably one of the most likely to produce shock to those who have an idiosyncrasy. Ten per cent is what you spoke of. That is used with comparative safety as a local application and you can use it as a swab. I don't consider it highly dangerous. I have seen a few cases of shock from it. Ten per cent is not strong as a local application, although I only use four per cent. It is wise to have either, amylnitrite and aromatic spirits of amonia convenient.

Dr. Edwards: There is another angle, and that is the medical-legal angle. It is now considered criminal negligence to use cocaine without having ether close by. That is the only antidote for cocaine poisoning, ether. I don't wait until the patient gets flat on his back and sick, you commence your ether right away, that is the only antidote recognized in St. Louis today for your patient.

Another thing, too, it is common procedure down there to give three grains of luminol a half hour before using cocaine. That neutralizes your depression from the cocaine and you have a better patient. Use three grains of luminol given a half hour before in any solution that you wish and if he begins to look sick, commence ether right away. So never have cocaine or use any of it without having ether close by. Any questions of Dr. Hedgepeth?

Dr. Hedgepeth: Alkolene will do the same thing. I always keep a bottle of Alkolene in one case and if a patient should go bad on cocaine, it will do the same thing that Dr. Edwards said his ether would.

Dr. L. A. Lydic, Dayton, Ohio: Will you give the post operative treatment of pus ethmoid—treatment that is given?

Dr. Larimore: You asked about ten per cent solution of cocaine,—twenty per cent is a whole lot safer than ten per cent. It is usually safer if you use half as much. You are using cocaine for the surface, you know, and it shrinks quicker, you get quicker external shrinking of the tissues and less absorption and you are going to find in your circulation a ten per cent, or I think even four per cent is even more dangerous, especially if you use the same amount per volume of cocaine, I mean cocaine crystals, as I do, for you usually get your shock immediately. But if there is any question about it, just ask the people, tonsillectomies and work of that kind, that is routine in our office, to ask our patients, no matter who, whether or not they know whether they are susceptible to cocaine. Once in a while a patient

will come in and sit down in the chair and say, "Don't use cocaine on me." One day a lady came in for some treatment and I just passed a very small swab along the floor of the nares so that it would not irritate her and I noticed that I had hardly passed it through until she got that kind of a pallor and I always keep an ether bottle handy. We gave her ether and just at the first inhalation she got a little of it and she says, "I don't want to go to sleep." And she says, "That is the first time anything like that had ever come up." She had not been sick.

I have been using cocaine blocks for some fifteen years but I don't use a very large volume, very little.

Dr. Edwards: The post operative for ethmoidal syndrome the nasal cavity closes first in I will say for twenty-four hours. That is the average patient blows his nose and causes trouble. We use a one per cent cocaine in oleum phenol,—oleum phenol is three grains of phenol to one ounce of albolene and to that we add four grains of cocaine alkaloid. That makes a one per cent in phenol. That is prescribed and the patient uses one dropper full of that in that nostril four times a day and we don't touch the nostril for ten days. You may infect, you may go up and swab, you may pull out the orbital plate. Sleuder recognized that and he stayed out for ten days and suggested the use of oleum phenol and keep the patient quiet.

Now you might blow out both of those because if they ever blow the nose, the chances are that they will break the orbital plate. If they should, it won't do any harm. We lay an ice pack over their eye to hold the eyeball and keep shrinking it down, using some oil.

I had one lady, who wouldn't go to the hospital and we had to do it in the office, an ethmoid syndrome. That night she got pretty stuffy and she blew her nose and I got a call about ten o'clock and her eyeball was out from its orbit and I called Dr. Sleuder, so he went down with me. He says, "Well, she has broken the orbital plate." We put an ice pack over the eye and we went on with the oil treatment, but we didn't touch the nostril for ten days. No swab, just used the oil treatment.

Dr. Reid: I want to tell a little story. Once I heard of a meeting and a preacher happened to get the wrong kind of teeth in his mouth and instead of stopping at one hour, he went on for two hours. His subject was the Scriptures in general. And he preached a very interesting sermon and he covered the books of the law and all of the books of history and then he got poetical and he came up to the major prophets and he preached a long time and analyzed the book of Isaiah and after he reached that point he says, "And Isaiah, what will we do with him?" And one old lady says, "That is all very interesting, but Isaiah can have my seat, but I am going home." (Laughter.) Mr. Chairman, I move we adjourn.

Chairman Brann: We will adjourn until seven o'clock in the morning at the hospital. The clinics are at the hotel. Nine o'clock. The session is adjourned.

10:00 P. M.

Details of Management in Vacuum Cataract Extraction

By T. J. Ruddy, *Los Angeles*

(An Address during the Fourteenth Annual Convention of the American Osteopathic Society of Ophthalmology and Oto-Laryngology, June 1929 Des Moines, Iowa)

BRILLIANT surgery whether applied in a general sense or to the eye merits our highest approbation but skill alone in the wielding of a Cataract knife will fall short of meeting the principles of Surgery if the minutest detail in the management of the operation is overlooked or ignored.

Morale of Patient

It is highly pleasing to the patient to know that his stay in the hospital is to be short, that is "just a few days," (not weeks). He is happy to learn that he will be permitted to walk to and from the Surgery if he chooses to do so; that he may sit up in bed or in a chair in his room and be at liberty to walk about the corridor or spend a goodly portion of his time in the Solarium, and, that the urinal and bed pan are not to be trials through which he must endure. Backache, hypostatic pneumonia, bed sores, stiff joints and chilling from lack of exercise create neither fear nor dread in his mind and the oppressive consciousness due to darkness of both eyes being bandgaged is not to be his prison for at least one eye is free from the beginning, and his body unshackeled to go where he may, and his mind as free as the great open spaces of the world in which it sees and moves, if the operation he is to undergo is of the type it should be and under the further details of management which I recite here.

Pre-Hospital Preparation

Those of us who have observed the handling of patients during this stage of the procedure at Shikarpur India or in the European Clinics and especially in many instances at the Barraquer Clinic in Barcelona Spain have studied in amazement the remarkable results issuing from the indifference frequently displayed when a patient with pyorrhea caries, abscessed teeth, Septic tonsils, empyemic sinuses, discharging ears, bronchiectasis, static colons, prostatic infection, skin infection, blood chemistries, that must have been wrong, are led from the yard or waiting room placed on the table and after a casual preliminary scrubbing of the face and irrigation of the eye the cataract is removed.

This may not be the time or place to excuse the situation on the grounds that the resistance of the tissues in the bodies of those patients has overcome by adaptation the dangers of the legion of bacteria present, however it is true that tissues can and do acquire a protective inherency against the invasion of bacteria inert or saprophytic even to broken surfaces.

Whatever our convictions are regarding bacteria, their province

and power, it remains to be said that in America at least we have not been dirty enough or unhygienic over a sufficiently long period of time to have developed an immunity that will warrant an indifference to foci of infection in any part of the body in preparing a patient for Cataract Surgery.

The next task then is the removal of infected tonsils and teeth and the correction of infection elsewhere in the body; establishing intestinal cleanliness and asepsis by the use of enemata and mild saline cathartics and Osteopathic treatment and a diet free from animal proteins over a period of ten days to two weeks. Attention should be directed to a consideration of the bronchi and lungs as the presence of asthma, bronchitis, tuberculosis or the symptom cough may prejudice good results. High blood pressure is a contraindication as is also advanced Graves disease. Chronic gastritis of catarrhal or nervous types frequently contribute to nausea, vomiting or at least epigastric discomfort and should be corrected as far as possible. The presence of renal insufficiency, or pathology is also a menace. The routine Wasserman; A study of chemical retention or the faulty production and distribution of the end products of Metabolism, or an imbalance between the pH of blood and urine resulting in a lowered or much increased alkalinity of the blood should be checked, and finally the dreaded hyperglycemia (125 or above) must be vigorously dealt with by the use of a low carbohydrate diet and if necessary the injection of insulin, as rarely will it occur that healing will take place satisfactorily if this precaution is not exercised. It is not superfluous advice to note the taking of the tension of the eye with a good tonometer for the presence of glaucoma or the increased tension of a chronic uveitis which is frequently seen in hypermature cataracts. Posterior synechia of the iris may exist and require preliminary surgery followed by the use of a 1% atropine three or more times daily to insure a free lens and free drainage of the globe.

The use of the Slit-lamp and the ocular microscope will reveal whether the capsule is thickened, or thin and wrinkled. It is also possible under full dilation of the pupil to detect the consistency of the vitreous whether watery threatening an easy lens or jelly like insuring reasonable safety and if thickened bands in the zonule anchor the lens in a given area which knowledge will prepare the surgeon beforehand to meet this unusual but frequent complication.

A great many bacteria inhabit the conjunctival folds especially towards the conthi. The frequency with which certain varieties are found vary very widely in different groups of different years and different times of the year however the Bacillus Xerosis is present in about 95% of all tests; Staphylococcus albus 85%; Pneumococcus 15%; Strep and Staphylococcus Aureus about 5%. The average bacterium in the body and especially in the conjunctival lives a saprophytic inert career and in the majority of instances continues to do so even after it invades the neighborhood of broken tissue. This misleading security should not be felt if the diplobacillus, pneumococcus, Strep or Staphylococcus Aureus are present. No surgery should be done until the conjunctiva is not only clinically clean but free from a growth of pathogenic organisms on blood agar.

Testing the culdesacs for bacteria is not as simple as the practice of altogether too many surgeons might imply. The use of the loup or cotton swab should be tabooed. Instead a few drops of 50% physiological sodium Chloride should be instilled within the culdesac and then drawn off with a pipette and sent to the laboratory for smear and culture.

More than one half of the number of smears taken are negative while cultures made from the same specimens show virulent activity in from 24 to 48 hours.

It is generally conceeded that it is practically impossible to sterilize the conjunctiva however if Hexylresorcinal in a (S. T. 37) solution of 25% is instilled three times each day during the week preceeding the operation and, on alternate days at the office if the retrotarsal folds are flooded with a 1-10000 oxycyanide of mercury it will be found at the time of the last test 24 hours before the operation that no growth on blood agar will occur. I do not use bichloride of mercury as it is too irritating and coagulates the mucus leaving an impenetrable coat which obviates the purpose for which it was intended.

Now and then purulent tear sacs are met with and must be irrigated with 1% silver nitrate until clean, or if impossible to establish sterilization the sac should be exterpated or the canuliculi ligated.

Hospital Preoperative Preparation

A chief requisite the night before the operation is sleep and rest. This may be best obtained at home in a bed and under conditions to which the patient is accustomed. I frequently take advantage of this plan if the patient is one of a retired disposition and not too temperamental. The disconcerting "hurry" to the hospital in the early morning hours in order to have the eye prepared one hour before the operation precludes its recommendation as a routine practice.

Five grains of Veronal or Phenobarbital may be given on retiring for the night and this practice may be employed during the entire preceding week with profit to nervous and excitable patients. This is repeated in the morning one or two hours before going to the Surgery but caution should be exercised to not produce a somnos that would prevent control over the eye movements while performing the operation. Morphine is not employed because of the tendency to nausea and vomiting. Catharsis is not employed although an enema may be used. They usually disturb the patients' rest too early and frequently the enema is not wholly evacuated and becomes an annoying factor while on the table, and is unnecessary if the prehospital requirements are carefully and considerately carried out.

The toilet of the face and eye the "night before" is too important to not receive adequate attention.

Instillation of 1 to 4 S. T. 37 is done over a period of five minutes, the cilia on the upper lid clipped and likewise long brows. This is followed with a few drops of 1% atropine for pupillodilation. If difficulty has been experienced in sterilizing the conjunctiva the eye

should not be bandaged as it will accumulate moisture, heat the tissues and encourage bacterial growth. The patient will be much happier in all events if bandaging is omitted and I have seen little or no difference in the results if antisepsis has been diligently practiced previously. Too the absence of the bandage may be a preventive of dementia, delirium, or acute mania which occur in about 5% of all patients whose age is 80 years or over. One advantage in the use of a bandage over the cataract eye is that in the morning if the dressing contains a suspicious secretion surgery may be postponed rather than flirt with danger, however a preliminary culture or series of cultures will disclose the presence or absence of pathogenic organisms.

The Surgery Preoperative Preparation

The questions of comfort and morale of the patient are still paramount. After visiting the toilet for the purpose of evacuating the bladder instead of using the urinal and with one or both eyes bandaged he walks or is brought to the surgery in a wheel chair (not a cart) and is assisted to the table which has previously been prepared with a heavy springy cushion and pillow for his comfort during his stay.

The eyes are irrigated with 1-4 Hesylresorcinol for 3 minutes and the face from the hair line, laterally and above, to and including the upper lip is prepared with a 10% solution of Mercurochrome after washing with green soap and rewashing with sterile water to prevent smarting of the skin. Pledgets of cotton are placed over and in each ear to catch any overflow of solutions from the eyes and to obviate restlessness that might be caused by water trickling down the face and neck.

Anesthesia

The anesthetist now introduces 2 CC of a 1-11 Nodolor or a 2% Novacain to which has been added 1 drop of adrenalin below the zygoma inserting a 28 gauge needle to the Condyle with a line of anesthesia preceding then drawing the needle completing the "infiltration block" of the branches of the 7th nerve that supply the Orbiculare corrugator and frontals resulting in akinesis of the lids, thus precluding any possibility of "squeezing" by the lids during the operation. The eye to be operated is flooded with a few drops of a 1% butyn every three minutes alternated with a similar amount of a 1% holocain until three applications of each have been used or until the surgeon is ready to operate. A few drops of adrenalin 1-1000 are instilled at the conclusion of the anesthesia. The use of Encatropine is indicated if full mydriasis is not effected by the earlier use of atropine and it is wise to place a few drops of a mydriatic and of the anesthetic in the opposite eye to quiet the internal musclature and the corneal and conjunctival reflexes.

A general anesthetic is necessary in the vacuum removal of congenital or juvenile cataracts in children and may be required in nervous and uncontrollable adults but is not a procedure of choice if its use can be avoided.

A strip one inch wide of celluosilk is glued down to both brows with collodian or held at the ends with adhesive to insure absence of contamination from the brows. If the principles of general surgery require the exclusion of hair from the field their practice here is doubly essential for perfect asepsis and perfect anesthesia are two requisites which will make success, certain other things being equal.

Solutions of Atropine 1%, Eserine ½%, Butyn 1%, Holocain 1%, Cocain 4%, Epinephrine 1-1000, boric acid 1%, 50% physiologic Sodium Chloride should be at hand sterilized in sterile containers. I also require Atropine Ointment 1%, Eserine Ointment ½%, Bichloride of Mercury Ointment 1-5000 and plain petrolatum in tubes on the supplies table after being submerged in alcohol for 10 minutes. Assuming that all who are to participate in the operation have "scrubbed-up" for ten minutes and have dropped the fingers in a U. S. P. iodine solution, following with a neutralization of the iodine with alcohol, that their hands are gloved with rubbed gloves and all within the room are gowned, capped and masked, the table properly draped and a mask over the patient's face, the lower half which covers the nose and mouth to be made from a few layers of gauze, the balance of the eye-sheet, with aperture exposing both eyes from temple to temple to drape over the end of the table,—in order for the operation.

The surgeon is seated at the head of the table; the instrument table at his right or left on a level with the patient's shoulder and a trained assistant—one with patience, endurance, obedience and an alert mind and eye—seated on the side opposite to the surgical eye.

A good light, not too bright, falling over the surgeon's shoulder and not towards the macula should be provided rather than the use of ceiling or hanging lights. A better arrangement would be large west and north windows with the head of the table directed to the angle between the windows. The Oculovac motor and pump are on a table near by and in charge of an assistant or nurse. The operation should not be begun until every need and every attendant are in their proper places and only the Surgeon should speak to the patient or to any one else and he only in quieting and assuring tones, never unnecessarily antagonizing the patient during his instruction to "look down" or "look right" or to "not look-up" especially if the patient is the least nervous or one with hypertension. The eye-lids now should be akinetic and if so the author's double angular hooks are introduced under the lids avoiding contacting the cornea. These hooks are so constructed that the assistant's hands are out of the way flat on the forehead and face of the patient but permitting of a movement of the hooks to or away from either canthus at the same time retracting and *lifting* the lids from the eye ball.

Five mimims of a 2% Novocaine are now injected beneath the conjunctiva that is to be fashioned into the flap. If the patient has any difficulty to look down, an injection should be made into the Superior Rectus Muscle through which a thread may be passed later for the purpose of drawing that structure forward forcing the eye downward.

The Flap Method

The use of a conjunctival flap is another step toward conservation. Its employment insures easy manipulation of the eye with a minimum of traums. By grasping the flap with a smooth jaw fixation forceps in lieu of the "biting" and tearing forceps applied to the eye ball it is possible to hold or move the globe in accord with the knife or oculovac cup. The flap permits of the "suture" which insures an immediate surgical closure of the incision to be followed by healing through "first intention," the absence of infection, and affords a freedom of movement by the patient rarely or never attended by a reopening of the wound, or a prolapse of the iris or its incarceration or a loss of vitreous regardless of whether the patient may sneeze, cough, vomit or chooses to walk about the room or hospital.

An incision with scissors is made in the conjunctiva about 8 or 10 m m above the center of the upper limbus and extended down on either side to a few millimeters below the equator on either side about three millimeters wide to permit of ample tissue for the introduction of the sutures.

A "o o" black silk thread about 5 inches in length is carried on a full curve or ⅜ curve non-cutting conjunctival needle through the center of the flap and the center of conjunctiva from which it was separated, loosely tied and the loop and ends drawn over the globella. Two additional sutures are placed in the edges of the flap near the 180th meridian, tied and the loops and ends likewise disposed of in their lateral positions. Two more are placed one in each of the intervening spaces immediately above the two latter and the knot loosely formed, etc., making five sutures in all.

This type of "flap" permits of the control of all bleeding before the eye is opened and obviates the difficulties of trying to fashion a flap with the knife after the corneal incision is completed the "tugging" and sawing of which threatens at every moment the integrity of the eye and which is attended in every instance with bleeding and the accumulation of blood in the anterior chamber. It is needless to add that clouding of the anterior chamber is most undesirable in any form of extraction of the lens and especially in the vacuum method where a clear pupillary space is required for placing of the oculovac cup.

The Incision

A clean uniform line of separation is to be desired rather than a saw-tooth or irregular line as the former affords an opportunity for the cornea to fall back into its original position and contour which restoration is conducive to sphereicity and the absence of astigmatism. Healing takes place more rapidly because of apposition of the margins; incarceration of the iris is practically impossible especially if the incision is as deep in the sclero-corneal junction as is possible without injury to the iris or ciliary body. The blood supply is more generous than in the clear portion of the cornea and an incision so placed is rarely followed by a slow healing reaction which tardy process may cause a decematitis or other variety of keratitis and its sequela of nebulae, leucoma, opaque stria and the inevitable loss of

clear vision. To insure a good incision the point and edge of the knife must be sharp. Any departure from this requisite invites disaster. To gouge indefinitely with a blunt point knife and worse to saw to-and-fro with a dull edge instrument is to willfully wreck without reason.

My knife, which is scimiter-shape, is introduced beneath the flap at the 180th meridian, carried across the fully dilated pupil to counterpuncture the inner terminus of the meridian. The belly of the corneal blade is now above the upper margin of the pupil and cannot engage the iris, another to be deplored complication when it occurs as it frequently does with the straight edge Graefe knife. The wide belly of the blade forms a wedge toward the gradually tapering point enabling the surgeon to complete the corneal incision with *one forward movement* and a minimum "drag" on the tissues which is not undesirable in the elimination of trauma.

During the incision the flap is maneuvered by the fixing toothless forceps so that it is possible at all times to view the blade in its movement to an emergence from the anterior chamber beneath the upper portion of the flap.

Should the iris because of insufficient mydriasis prolapse over the cutting edge of the blade and a loss of aqueous prevent its replacement the knife may be withdrawn, and after waiting a few minutes for the anterior chamber to refill or after refilling the chamber with a 50% physiologic Sodium Chloride solution with a hypodermic syringe, another knife is introduced, the central portion of the belly of which is dulled to allow the iris to slip off its edge, and the incision completed with a rocking movement to engage the tissues on the sharp portions of the blade. The flap is now lifted until the lips of the corneal section are separated and a few drops of a 4% cocaine and adrenalin are introduced into the anterior chamber to effect perfect anesthesia of the iris before doing the iridectomy.

The Peripheral Iridectomy

All physicians admit that the more normal a surgical procedure leaves the structure the more normal should be the function. Can we leave the iris in its normal shape and fabric without inviting trouble in the extraction of cataract? Possibly yes, but not invariably. The eyes that are lost as a result of prolapse of the iris into the wound are the eyes that we should save. Some claim less than 1% lost. If an iridectomy that will prevent prolapse will save 1% or less, then it should be done. Any iridectomy will do this but the "peripheral" form will accomplish the purpose with less objections than will the "central" form. To perform the peripheral iridectomy the corneal incision must be deep, that is, in the sclerosed portion of the cornea. It is done by grasping the irsi with iris forceps near its base directly above the pupil and without removing the iris from the anterior chamber snip a portion about 1 millimeter in diameter. The coloboma should lie immediately in the line of the corneal incision where it cannot be seen from a direct-front view, thus the purpose of the iridectomy is fully realized and the cosmetic question satisfactorily an-

swered. The placing of the coloboma beneath the sclerosed part of the cornea also prevents light entering it doing away with an alleged monocular diplopia. The pupil retains its circular shape and its sphincteric reaction, so necessary to a proper control of excessive light and its consequent photophobia. Too the circular pupil eliminates spherical and chromatic aberration by excluding the peripheral rays through the cornea and their transmission to the retina. The astigmatism with the peripheral coloboma is much less; there is little or no bleeding; tags of capsule do not reach the corneal wound to interfere with healing; no incarceration of the iris as no "pillars" are formed as occurs in the central coloboma technique and the entire iris being present in front of the lens, spontaneous delivery of the cataract or replace of the hyaloid or loss of vitreous is prevented. The coloboma may be made before or after delivery of the cataract however if a steady hand and a superficial bite of the iris are exercised the capsule will not be injured and even a very minute coloboma will favor pushing the iris upward during the extraction of the lens.

Vacuum Extraction

After trying a variety of cup-shapes over a period of nearly ten years I have concluded that an oval shape is to be preferred to the round-shape. The oval may be parallel with or at right angles to the shaft of the oculovac. The former is better in thick capsules and the latter in the thin wrinkled capsule present in the hypermature or advanced-age cataract.

The cup is placed well down towards the lower margin of the pupil, the index finger placed over the by-pass and the instrument slowly rolled between the fingers and thumb in such a way as to compress the lower part of the lens while lifting the upper part the while carrying the lens through the corneal opening. Thirty-five to sixty *cm* vacuum is required to firmly engage the capsule and draw or "pucker" it away from the zonule. Consideration must be given to the texture of the capsule through study with the slit-lamp and microscope or other efficient means as a greater or less vacuum may be indicated as the capsule may require. An assistant or nurse should read aloud every change of the vacuum as seen on the indicator, to guide the surgeon during the progress of extraction.

Advantages of this method over the "hook-and-spoon delivery" require but little emphasis. The chief and salient advantage is that at no time is pressure employed but instead a lifting by suction. This procedure obviates the loss of vitreous which is caused by pressure in practically every instance and should a portion of the capsule come away it is precisely what is done in the capsulectomy method and the lens is still susceptible to the hook-pressure technique. In 400 operations by the vacuum method in clinical and private practice during the past few years this has occured but three times and with no embarrassment save for the loss of time and the fear that a loss of vitreous would develop. To insure against a needling or secondary operation to the capsule the edges of the latter were pinched off before the cataract was delivered.

To the surgeon who is willing to work and become skilled the vacuum extraction offers a solution for the fears and losses attendant upon the force-pressure-and-push procedure and the public will be happy to know that there is an insurance policy for their vision in your method and in your skill, as well as in the many important details of management enumerated here.

Closing the Wound

Immediately following the vacuum extraction of the cataract the sutures on the 180th meridian are drawn until the tie surgically and physiologically approximates the conjunctiva. Before concluding with a second knot the central suture should be tied being careful not to "lift" the sutures previously tied as an irregular line of union will ensue. Ends ⅛ inch in length should be left to enable grasping with forceps at time of removal of the sutures. Next tie the two middle-lateral sutures and draw the ends across the horizontal middle of the flap uniting a single strand of the right with the left just firmly enough to exert pressure on the flap to obliterate the pocket beneath the flap, but not sufficiently taut to disturb the line of union on either edge of the flap. The use of this "girth" prevents leakage of the aqueous beneath the flap and is an additional insurance against gaping of the corneal lips and the inevitable slow healing, as well as a possible hernia of the iris and distortion of the corneal circle and spherical curves.

Introduce the spatula end of an instrument I call my cataract finger between the lateral sutures and carefully stroke the iris toward the center of the eye until the pupil is round and the iridectomy coloboma is clearly in view below the corneal section. Irrigation of the anterior chamber is unnecessary in an uncomplicated result, besides its use frequently forces the iris between the corneal lips creating a "bagging" which will tend to recur later should conditions as "squeezing" present that would force the aqueous beneath the flap.

The Toilet

Remove all mucous threads blood stained or otherwise from the culdesacs. Instill a few drops of ¼% Eserine to effect miosis and its tension of the iris for the purpose of maintaining patency of the coloboma and preventing prolapse of the iris.

Flow ½% Eserine ointment into the outer halves of the culdesacs and a generous amount of 1-5000 bichloride of mercury ointment or a 10% boric ointment over the puncta corunculæ, the remainder of the culdesacs, along the cilia and over the external surface of the lids. The presence of the latter ointment lends a feeling of comfort during the following 48 hours and is a good prophylactic against infection.

Pledgets of cotton torn to one half the width of the orbit are wet with boric solution and laid shingle fashion over the lids beginning at the inner canthus. Dry cotton may tickle the skin especially of the nose while the moist cotton will mold itself to the contour of the surface and add much to the comfort of the eye.

It has been found best to limit the unoperated eye to vertical movement at the most that the operated eye may not be disturbed. In order to do so and still permit the sound eye the freedom of vision an aluminum mask with a horizontal slit is placed over the eye and anchored with adhesive strips which extend horizontally across the surface gauze on the operated eye to the temple. Two one-quarter inch strips of adhesive are laid diagonally down to right and left to complete the security of both eye dressings.

The patient is assisted to the wheel chair permitting his own initiative to do the guiding afforded by the vision of the sound eye through the slit in the mask.

After Care

The patient remains quiet in a lying or semi-reclining position for 8 to 10 hours after which he may be given the same liberties he enjoyed previous to the operation except such movements as would cause unreasonable straining. Yes he may have a cigarette, pipe, or cigar if it will add to his contentment and if a Latin foreigner and accustomed to his wine he may have the usual dinner glass barring of course any functional or structural contraindication.

A nurse or attendant should remain with the patient day and night for at least the first 48 hours to insure the peace of mind of one with every necessary wish gratified.

The dressing is removed on the second post-operative day. A careful inspection is made for any evidence of infection and if too much clouding of the cornea is present a few drops of 1% Dionin and 1% Atropin are instilled from a sterile container (not a stock bottle). Antiseptic ointment is added and the eye is left uncovered. In subsequent dressings on alternate days, Eserine may be alternated with atropine or either one used continuously depending upon a threatening of a posterior synechia or its absence.

The "girth" sutures should be removed on the fifth day after touching them with a crystal of cocaine. The remaining sutures may be left to slough out or may be removed later at any convenient or expedient time.

The patient may be dismissed from the hospital at any time after the third post-operative day if local and general conditions warrant, a bit of news that will be received with much satisfaction whether or not his finances require this degree of economy.

At the end of one week the dressings are discontinued and dark glasses substituted with the exception of a Ring mask which may be worn at night for protection against trauma by the patient's hands.

There is much left unsaid, that is not within the province of this paper, and which is as important as what I have said. If however conditions are present that require the information it implies that what I have stated here has not been followed to the letter otherwise the complications that you may have in mind will not occur and the modus operandi of their treatment will not be required much to the surgeon's joy and the patient's happiness.

The Tonsils and Their Diagnosis, In Chronic Focal Infection

By Dr. P. F. Kani, *Omaha, Neb.*

THE tonsils lie imbedded in the fossa trianguloris, on each side of the fauces. The enveloping and environmental structures are of importance.

The tonsil is surrounded on all sides, except its faucial surface by powerful active muscles, which are in turn covered by the mucosa of the mouth.

The palatoglossus muscle cover the interior buried portion of the tonsil, and together with the mucosa which overlies it, constitutes the anterior pillar of the fauces. The superior constrictor muscle of the pharynx envelopes the internal deep or buried surface.

The palatopharyngeus muscle spreads out and covers the posterior surface, and forms the posterior pillar of the fauces.

All these muscles are so loosely attached to the capsule of the tonsil by connective tissue, that it permits of traction to some extent. Because of its loose attachment, when grasping it with the tonsil forceps, the gland may be easily lifted in different directions from its bed, in the fossa triangularis.

The arterial supply to the tonsil is abundant. Six arterial trunks furnish branches to the tonsils: These branches are:

The tonsilar artery
The ascending palatine
The ascending pharyngeal
The dorsalis lingual

And some twigs from the small meningeal artery. The tonsilar artery often is the largest. All arteries enter the tonsil after penetrating the superior constrictor muscle of the pharynx which covers the internal deeper buried surface of the tonsil. Though they do not supply the tonsil directly, there are other arteries in this region of interest. The facial artery which gives off the tonsilar branch sometimes makes a sharp curve toward the pharynx, and may lie quite near the tonsil, with only the constrictor muscle separating the two. Usually the internal carotid artery lies at a safe distance, about 1.5 centimeter from the tonsil.

The return circulation from the tonsil is through the pterigoid plexus into the pterigoid veins.

The veins on the floor of the fossatonsilarie are of clinical importance. After leaving the tonsil they form a plexus in the tonsilar fossa. If the tonsil has been carefully removed, this plexus can be plainly seen, as it lies on the floor of the fossa. When numerous and large they may be easily injured and often produce troublesome hemorrhage.

The exact function of the tonsil is not knon. The tonsil is a lymph gland, but it differs from other lymph glands as to its superficial location, yet it practically serves the same purpose as lypmh nodes.

One of the chief functions known is that it provides a barrier

against the advance of infection from one tissue to another. It destroys bacterial infections, enmeshes and holds them, to some extent at least, from entering into the general system.

This function is impaired with each infective process, and finally it is abated entirely, as the tonsil has gradually become a pathological structure.

The tonsil in the fetus is developed at the 6th month in the uterus, and a normal tonsil function is the most useful and active from the first to the third year, therefore tonsils ought not to be taken out before the third or fourth year of age. Of course there are exceptions. Osteopathy can do much for their improvement if they cause trouble this early in life. Science tells us that the tonsils are for the development and growth of the child, and if a child is taken care of from the beginning and there is no serious infection of the tonsil until the person is 35 to 40 or more years of age, the tonsils disappear. This is their natural process, as they have done their duty for the development and growth, in their life's journey. Of course a normal tonsil at any age possibly has some useful function, if there is no pathology in the tonsil.

But if once a bad infection has set in, so that the crypts are filled with streptococcus or other pus, from that time on, tonsilitis, quinsy, and sore throats, are the result until through several infections with inflammatory conditions, nature gradually will ring an anastromosis between tonsil and circulation, which relieves the severe tonsilitis or sore throats, and the individual thinks he is better.

Then absorption into the system takes place. From that time on, most of these tonsils expel from the crypts some grayish-white, or cheese-like substance, which is the solid substance from the pus. This cannot absorb through the capillaries into the blood stream, and must be thrown out into the throat. Now while this absorption is taking place, the systemic ailments are establishing themselves unaware, such as: Neuritis, Arthritis, Endocarditis, and other systemic toxemia. They were formerly mistaken for cases of malnutrition. These are the perenial tonsilar problems, and there is a struggle against poor health in the individual, and getting old before time.

In explaining this to a physician, the answer was, that you can squeeze out some material from any tonsil; of course he did not say pus, so there was no further discussion.

But we know by experience when there is a complete infection in these crypts, it is going to stay there, and many experiences have revealed that all measures directed to destruction of the crypts have proved only partly successful, or have failed altogether. At a certain opportunity the infection comes back, and especially while the tonsil is the only gland that is exposed to the surface, and comes in contact with food, air, water, etc. An infected tonsil never has the resistance of the one which has never been infected. If there is a systemic pain of non-gonorrhea origin, and especially if pain is in Brachial plexus, down to the middle dorsal, look for infection in upper part of body, it may be infection of gall-bladder, or sinus, antrums, teeth, or tonsils,

but usually when neuritis or pain is in the upper dorsal and shoulder, it is due to infected tonsils or diseased teeth, there are other symptoms for the same cause, and the same cause has other symptoms. An examination will set the examiner straight. Get the history. Determine if there have been attacks of tonsilitis and sore throats, or has the patient in the past coughed from the throat grayish-white cheese-like and very offensive particles.

They usually will not give a complete confession as the most have a horror and fear of an operation, or they may have forgotten as usually the attacks of tonsilitis have become very infrequent in later years or ceased altogether, and perhaps they no longer express those offensive particles from the tonsils.

If there is a circumscribed redness around the tonsilar faucae even if we do not see any tonsils we just know there is some infection or some cause of this redness. But even if there is no redness, and tho very little tonsil or no tonsil can be seen by simply inspecting the throat, by the use of the pillar retractor the tonsil is discovered completely hidden behind the pillars. It may be found in one of many conditions.

An imbedded tonsil with many crypts filled with a cheesy-like substance which readily protrudes when the patient gags. Or the soft flabby tonsil containing not very large crypts, but are infiltred with a liquid cream-like pus. Again we may find a hard cirrhotic tonsil with closed crypts except one or two which remain open. These come in contact with air and food, etc. and give nourishment to the germs which cause a continued infection to be thrown into the circulatory system, and the different parts of the body. Also a tonsil may contain much scar tissue from repeated tonsilitis or peritansillar absceses, which have been lanced. Usually under this scar tissue we find imprisoned pus. By the use of the aspirator, or simply by compression, pus can be expressed from the tonsils. Of a culture of this pus is taken it is usually found to be streptococcus, although other Bacteria are found.

When the soft spongy tonsil is removed, the pus is expressed from all points of the tonsil resembling potatoes being forced thru a sieve. There is an exact resemblance although the particles are not so large. From any of these tonsils there is often pus under the capsule in the front and upper part of the posterior pillar.

In children the tonsil if diseased is either large and spongy or hard and protruding.

The lingual tonsil often is the cause of systemic infection. It may be especially well developed in cases in which purulent tonsils have previously been removed, producing the same symptoms as before the tonsils were removed.

The symptoms pointing to the existence of a lingual tonsil are the sensations of tingling, burning pain at the base of the tongue in acute lingual tonsilitis, dry cough, dull ache in the region of the hyoid bone and painful swallowing.

The throat may look normal unless a pharyngicsopic mirror is used, when there will be found a speckled appearance of the lingual tonsil, the same as in any acute follicular tonsilitis.

We often find enlarged lingual tonsils surrounded with varicose veins, larger in one side than the other. This often is due to an infection of one side of the nose. There are several cases I wish to mention:

I—A lady age 58, about every month once, sometimes twice, had sick headaches, throwing up bile, at every movement for 2 to 3 days. Upon examination found the tonsil with hard grayish-white cheese-like pus in the crypts and very large,—I believe the largest I ever saw in any one this age.

Since removing the tonsils, she has no sign of the former attacks. It is now three years.

II—Patient from Plattsmouth, Nebraska, referred to me by Dr. O. C. Hudson, who had been suspicious that the tonsils were the cause of the patient's trouble.

Patient's History: Numbness right side of face. Dentist told him to have upper right bicuspid extracted. This started a headache he could not endure; went back to dentist, who injected some medicine into the hole in the gum from which the tooth had been taken. The patient lost his equilibrium. My thought was that the dentist had injured the nerve in some way, maybe a slight connection with the cochlea nerve on the same side. The patient had blamed the dentist and accused him of the same thing.

But upon examining him with the aspirator to the tonsil, the pus came into the glass tube from many small crypts. 24 hours after the tonsils were removed the patient had not a sign of any of his former symptoms.

III—A young lady, 28 years of age, had her tonsils extracted four years ago. Had continuous neuritis on right side of face and neck. Upon examination it appeared to be a very nice clean and complete removal. But in the fossa triangularies, close to the tongue, was found a red spot. I took the tonsil retractor, touched it, and real pus came out of it.

It did not seem possible to get hold of it with forceps to remove it. So I cauterized it with the diathermic current. The symptoms were relieved very soon and have now entirely disappeared, and I know many of you have had the same experiences or other symptoms relieved, through the removal of focal infections.

Human nature doesn't change very much through the centuries and we suppose after Adam and Eve were evicted from Eden, they remarked, rather nastily, that they were glad to get out of the neighborhood anyhow, on account of the smell of the animals and everything.

One with an old-fashioned revival background cannot help wondering, a little wistfully, as he carries out the barrels of ashes these brisk fall mornings, what they do with all the ashes in hell, since they don't need them for filling on account of all the paving work there being done with good intentions.

Prevention of Disease via Nose and Mouth

By Fred J. Cohen, D.O., *Wichita, Kansas*

INTERNATIONAL PROPHYLAXIS

IN my travels last year, it was my good fortune to meet physicians in many lands interested in nose and throat work. There were dozens who had a ready answer to my question, "What is the greatest preventative of disease?" In Western Africa, it was a bath a day. In Spain, lime water. In Italy, (Cascara Sarati), in Czecho-Slavia, it was spruddle water, in Germany, mud baths, and so on through thirty countries, until when I had journeyed to Ireland, I found that I need not have been elsewhere, as it is only necessary to lay one's lips upon the Blarney Stone to have continuous health.

It was a rare privilege to visit the Roman Tonsilor Clinic, and to meet personally, Dr. T. Mancioli. I am sure it will be of interest to you to know about his researches on children that he has treated without the use of surgery. Compressed air forced through a cylinder containing calcium and iodine, while patients inhale these fumes for thirty minutes, is Dr. Mancioli's treatment of tonsils ordinarily diagnosed as removable. Dr. Mancioli admitted to me that he thought "the conscious attention placed on breathing, was the real curative agent." Of the hundreds of children watched for years in regard to their growth and health, the percent is very low in favor of surgery. And so we have more scientific preventative Osteopathic advice to offer patients.

I learned from Dr. Djebedjian, in the oasis of Aleppo, Syria, that (Benet dehueg,) or falling of the tonsils, (inflammation), is treated much lie our Dr. Edwards does his finger surgery, and as Dr. Millard explains to relieve lymphatic congestion, the uvula is raised and surrounding tissues relaxed, where acute conditions are without abscess. The Arabic peoples have used this, as well as other osteopathic manipulations efficiently, since the 5th century.

Talking about nothing new under the sun, it will be of interest to Dr. Earl Miller, to know that the Arabs have also for centuries been using his treatment of "popping the ears," as a cure for fright.

Writers of the Koran were most interested in the prophylaxis of oral and nasal disease. The hygienic rules observed by the Mohammedans before prayer, are that of washing the hands three times in running water, the snuffing of water up the nose, and washing and massaging of the gums with the index finger and thumb, neck, head, and so on.

Introduction

Three factors I believe will round out for us as Osteopaths, the cycle of prophylaxis.

First, the Periodic Examination for Diagnosis.

Second, the importance of Case Histories, as a short cut to prophylaxis.

And third, that which makes the Osteopathic superior to the regular specialist.

Last year, I treated the subject of disease prophylaxis in a material way, concretely dealing with our research on germ ladened smoky air, and the non sterile silverware, as a means of spreading disease.

This time, I have the task of discussing the more important factors in the prevention of 90% of the diseases, since it is this number that makes their entrance by way of the oral and nasal cavities.

I.

Periodic Examinations of Nose and Throat

Someone once said, "The best ingredients must be put into a cake if the best cake is desired." The nose and mouth, holding the fort's entrance, often have blind pockets of pus and posterior nasal drippings to combine and infest nourishment, even though it may have been quite sterile in its preparation.

Since nearly all disease enters the body by way of the oral and nasal cavities, their normality is of the utmost importance.

Ignorance of an existing enemy, holding itself in readiness for an attack upon the body, and a detriment to systematic workings, is the cause of most diseases.

Therefore, periodic examinations of the Oto-laryngolist and Rhinologist, is, I believe, the most important physical prophylactic of disease. If the specialist goes further than diagnosis and treatment, and advises correct living and thinking, he completes the entire cycle of prevention by handling mental as well as physical disease. He has then, at his disposal, factors that make him superior to the regular specialist.

II.

In Regard Case History as a Short Cut to Prophylaxis of Secondary Disease.

It is my preference to class lesions into two groups. Those whose etiology come from outside the body, (such as from trauma), forming primary lesions, and those conceived internally, such as from a systemic infection forming primary lesions at the sight of inflammation, as well as secondary muscular and spinal lesions.

It is my belief that all secondary muscular lesions are formed complementary to bony lesions, and *all secondary bony lesions are formed in order to short circuit abnormal stimuli between the infection and the more delicate mental mechanism.* This short circuit may come about by lymph congestion, venusstasis, or direct nerve inhibition.

I wonder how many of us go ahead, hit and miss fashion, to treat an acute-itis, and when the patient returns complaining of even new symptoms, we only treat as on the previous day, and remind them to come again tomorrow?

It is more important to recognize and prevent a primary symptom, than it is to prevent secondary ones, since the permanent cure is thus dependent. There is just one way to prevent this mistake, and

that is to be careful of the case history. For instance, a patient comes to the general practitioner complaining of pharyngeal pain, headaches, recurrent torticollis and perhaps laryngitis. Regardless of a history of quinsy or throat surgery, I believe that 90% of our practitioners who fail to correct this type of complaint are correcting secondary muscular, bony, and lymphatic lesions, and are disregarding the fundamental etiologic factor,—the primary lesion, which may not be osseous.

III.

The Osteopathic Specialist is Superior

The theory of stimulation and inhibition makes the Osteopathic Specialist superior. This theory has taken our attention recently into a Kansas school and University, to prove the effects of abnormal stimulation during the process of their mental development.

It was our purpose to prove the falacy of the ever existing medical theory "that from stimulants, be they in the form of tonics, condiments, or exhilerants, come health."

I respectfully present data collected from the school of an average town, and for comparison, similar statistics which we collected in a municipal university of our State.

Statistical Data from our File on Valley Center.

No. Students	Stimulated	Non-stimulated	Grade Rating
Percentage	38½%	44%	
Average Age	14¼ Yrs.	15 Yrs.	A-90-100 B-85-90 C-78-85 D-70-78 F-Under 70
Creative Ability	20%	20%	
Average Grades	B & C's	A & B's	17½%, or moderately stimulated students, were not counted.

Statistical Data from our File on Wichita University

No. Students	Stimulated	Non-stimulated	
Percentage	23½%	50½%	Grade Rating Same
Average Age	21 Yrs.	19 Yrs.	
Creative Ability	22%	30%	26% or moderately stimulated students were not counted.
Average Grades	B & C's	A & B's	

The child who passes puberty on the production of power from a body not having artificial stimulation, has a greater percent of creative mental energy at his disposal as well as receiving higher grades in school and at the same time being younger by nearly two years than his stimulated classmate.

It is true then, that *the registering of continuous stimulae,* (due to a lesion such as an inflamed tonsil, irritated gastric glands due to drugs and condiments or bony abnormalities,) *dull the mental perception, and decrease its energy sufficiently to reduce his chances of normal physical development and mental advancement.*

I believe we have at our disposal, a scientific method of advising prophylactically against artificial stimulation. Because of its inhibitory effect upon the mind, we shall say to parents and educators, *"Do not stimulate your child artificially, if you wish him to be a mental person."*

I believe the etiologic link between the cause, (or lesion), and the effect, (immunity), becomes Dr. Still's greatest theory,—that of stimulation and inhibition. It is indeed this knowledge that makes the Osteopathic Specialist superior.

Asthma, Hay Fever and the Allergist-Serologist

By Dr. Phil R. Russell, *Fort Worth, Texas*

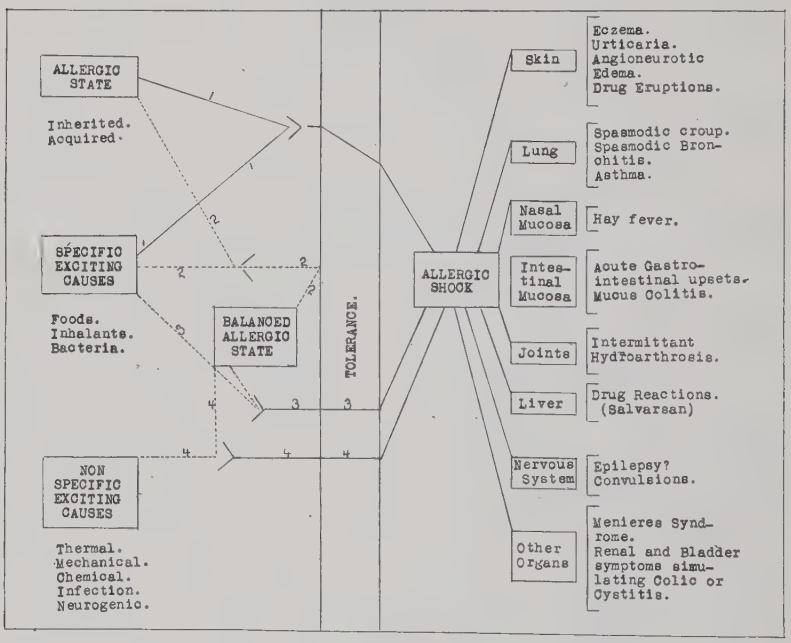
THE literature to date, on the theories of animal experimental anaphylaxis are full of controversies as to the real nature responsible for anaphylaxis, especially the interpretation of its analogous occurrence in the human. In the latter it makes its appearance in different clinical entities known as allergic diseases, such as, bronchial asthma, hay fever, angioneurotic edema, and skin diseases. Others include certain gastro-intestinal disorders, form of cystitis, arthritis.

Anaphylaxis is produced in animals as a result of experimentation, and is analogous to the allergic manifestations as found in the practice of medicine. The anaphylactic phenomena are considered acquired or induced hypersensitiveness, while the allergic diseases are due or thought to be due to an inherited or congenital susceptibility to hypersensitiveness.

We cannot explain how sensitization takes place. Maybe in utero through maternal or paternal inheritance. Neither can we explain why one person is sensitive to animal epidermals, another to pollen, still another to protein, nor why the sensitivity is expressed in some patients by respiratory symptoms as asthma, in others, while sensitive to the same protein, it takes the form of hay fever or one of the other allergic manifestations. We do know that in the sensitive individual we can produce allergic symptoms by bringing them in contact with the offending protein.

Although the conception of asthma as a manifestation of human hypersensitiveness is an accepted fact, in many individuals suffering from the disease it is quite impossible to determine the active cause

which sets up the reaction. In some patients when the exciting cause is known, it is impossible either to remove it from the patient's environment or to raise his tolerance sufficiently high to prevent the occurrence of the symptoms. In a fairly large number you will find many in whom attacks seem to be brought about by purely nonspecific causes, such as temperature changes, nervous influences, infections and mechanical factors. Therefore the protein nature of asthma and hay fever and the difficulties in evaluating the various factors in its etiology and treatment have led to a great deal of confusion. Every physician has been inclined to look at the problem from the angle of his own particular specialty. Thus we have nasal, infectious, toxemic, and neurogenic theories as well as the hypersensitive theory.



In order that I may explain to you in a very simple manner the known facts and observations, I am going to use a chart prepared by Milton B. Cohen. It is interpreted as follows:

In the center, dividing it into two parts, is a long block labeled Tolerance. While all allergic patients will react to the substances producing their attack the tolerance is different in each, and may vary in the same individual from time to time.

Reactions occurring on the left side of the tolerance block are symptomless; those passing beyond it to the right side of the chart are productive of symptoms.

In the upper left hand corner of the chart is a block labeled Allergic State. This represents the hypersensitive state. Patients in this state have been sensitized to some specific substance. Despite the

evidence of the hereditary nature of this condition, there is evidence to believe that only the predisposition or facility to be easily sensitized, is inherited, and that the allergic state is produced only after active sensitization by contact with the specific substance or substances after birth.

Below the block representing the allergic state is a block called Specific Exciting Causes. These may be foods; inhalant substances, such as animal epidermals, products of industry, molds, dusts; and bacteria. When a patient allergic to some specific cause receives a dose larger than his tolerance, allergic shock occurs, as can be seen by following Line 1. The site of the allergic reaction will depend in each case on the relative sensitivity of the different end organs of the body. These vary in their sensitivity so that in one individual there may result hay fever, in another asthma and in another skin eruptions or gastrointestinal symptoms. Or there may be combinations of these or any other symptoms, as indicated in blocks at the extreme right of this chart. This is the mechanism of the frank allergic reaction.

Frequently, however, patients who are exposed to specific allergens constantly react periodically despite their daily exposure. During their free period these patients are in the balanced allergic state, a term coined by Dr. W. T. Vaughan. This state may be produced either by a temporary raising of the level of tolerance (desensitization) or by variations in the dose of the specific substance or substances. As may be seen by following Line 2, when the patient in the allergic state receives a dose of specific allergens less than his tolerance, no symptoms result, but he is placed in the balanced state. This state is particularly labile. While in it an extra dose of some specific allergen or a reduction in tolerance may allow it to be exceeded, with a resultant allergic reaction.

At the bottom left-hand corner of the chart there is a block named Nonspecific Exciting Causes. Their number is legion, but they may be grouped under the headings, mechanical, thermal, chemical, infectious, neurogenic. These have caused endless confusion in the study of allergic patients, as they have frequently been considered by both patients and physicians as major causes. A very simple and common example is presented by the infant with eczema; the pediatrician attempts to adjust the diet; the dermatologist keeps irritants away from the skin; the allergist tries to remove from the patient the specific allergen. In some patients either method is sufficient; in others, a combination is required. Depending on the method used to produce the healing, a different physiologic pathology is ascribed to each case. In the case relieved by ointments, it is probable that the infant in the balanced allergic state has had symptoms produced by the additional mechanical irritation of soap, water and scratching. The removal of these irritants afforded an opportunity for the return to the symptom-free balanced allergic state.

Another characteristic example is presented by the patient who has attacks of asthma occurring every two or three weeks for six years. When first studied he was found to be feather sensitive, but attacks could be induced during the free interval by breathing in

cold air while the chest was rubbed with ice. Feathers were removed from the home, and all attacks ceased. One month after residence in a feather-free house an attempt was made to induce an attack by means of cold, as described above, but without avail. In this patient feathers induced a balanced allergic state, which during the intervals between attacks could be activated into allergic shock by means of a dose of nonspecific exciting cause, as cold. The mechanism described by which a patient passes from the balanced allergic state to allergic shock can be followed by means of Lines 3 and 4.

You can see from a study of this chart that the treatment of allergy may be accomplished in one of two ways:

1. Remove the allergic state.
2. Reduce the doses of specific and nonspecific causes below the patient's threshold of reaction so as to maintain him in the Balanced Allergic State.

The first method is impractical. In the first place, the inherited facility to acquire sensitivity is a fixed characteristic that cannot be changed. Secondly, it is extremely difficult to demonstrate beyond reasonable doubt the exact specific allergens responsible for the allergic symptoms, and it is not yet possible to obtain these in pure form. Also patients are usually sensitive to more than one allergen. Attempts to raise the tolerance to a level comparable with that of nonsensitive individuals have been partially successful in cases of pollen disease, as hay fever and its accompanying asthma, but even in these the tolerance is lasting in only a small percentage.

The second method of treatment, while sufficiently difficult, is nevertheless practical and affords relief for the large majority of patients. It is a broad clinical problem requiring the use of various special methods of study plus good common sense. The history of attacks, their periodicity, their relation to specific exposure, their disappearance on change of residence or climate, all afford clues. Skin tests with stock food and inhalant substances and with extracts of dust from the environment afford other clues. Bacteriologic study of the respiratory flora, and skin tests with these organisms are additional clues. Search for foci of infection and for the intrinsic pathology should be made. All clues must then be subjected to careful clinical experimentation, varying one factor at a time to determine their relationship to the patient's symptoms.

An outline for the study of a case of asthma is as follows:

1. Remove the patient for a period of two weeks to an environment which is free of inhalant substance. Such a condition can be produced in any room by means of a thorough renovating, covering the mattress and pillows with impervious material, and the installation of one of the electrically operated mechanical filters now on the market.

2. During the stay in the dust-free room, perform routine and special skin test, and study the effects of heat, cold and other physical factors.

3. If the patient's symptoms disappear while in the dust-free room, attempt to correlate the symptoms with some inhalant factor

in his home or working environment by actual exposure to these substances and the production of an attack.

4. Rearrange the home environment in accordance with the information gained by the above study, either by removing the offending articles of furniture or the production of a dust-free room at home for the part-time use of the patient.

5. Arrange the diet in accordance with information obtained by the history and tests.

6. For the patients who fail to get relief by the use of these methods, attempts at specific desensitization with the bacteria to which they are sensitive should be tried.

7. Nonspecific desensitization may be of use in rare instances, and for symptomatic relief ephedrin and adrenalin are helpful.

Treatment of Deafness Complicated With Otitis Media

Channing B. Ewing,
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It is well to remember in the treatment of deafness complicated with otitis media that whatever proves the best treatment for the infection is the most logical treatment for the deafness.

It is very essential that an early classification be made as to the extent of pathology and type, whether hyperplastic or mucopurulent. Much can be learned by the character of the discharge; if the secretion is thin, watery and odorless, a favorable prognosis may be considered. While on the other hand a very thick, chlorestinized secretion with a malodor, a more serious condition exists as the infection has buried itself beneath the periostium and a bone necrosis is present and the prognosis should be guarded.

Inasmuch as the tympanic wall heals by granulation, it is very rare for a case of purulent otitis media that has extended over a great period of time, that has not denuded small areas of bone. Wherever this denudation has taken place, bone necrosis invariably follows.

The purulent type is always accompanied by an early perforation of the drum membrane which is usually located near the center, very rarely the marginal wall, unless accompanying a systemic disease such as scarlet fever, measles or diphtheria, in which cases there is apt to be a rapid destruction of the tympanic membrane followed by necrosis of the bony lateral wall; this occurs in a small percentage of cases.

While a perforated ear drum is not inconsistent with very good hearing, fibrous bands and adhesions occuring at the region of the oval window and destruction of the membrana tensa is the determining factor in the retention or restoration of good hearing. When these adhesions are present to such an extent as to cause stapedial

fixiation, the clinical picture will be very typical. Functional tests will reveal a positive percusis willissi, high bone conduction and a very low air conduction, especially for the lower musical tones, with marked deafness of a conductive type.

One of the most serious complications that is apt to arise during the care of otitis media is an acute perulent labyrinthitis. This will be recognized by early symptoms of vertigo,nystagmus, acute stabbing pain in the region of the temple on the affected side; there may be a sudden loss of hearing, this depends on whether the infection is diffuse or circumscribed. If the infection is confined to the semicircular canals, the deafness will be only partial, becoming total when the cochlea is totally destroyed.

When total deafness suddenly occurs, surgical treatment is indicated. This consists of a radical mastoid currettement and opening of semi-circular canals wherever diseased bone is located, which is done to prevent the infection traveling to the meninges and not for restoration of hearing, as it is hopelessly lost.

Inasmuch as most cases of otitis media are secondary to and probably originated from the previous infection of the naso-pharynx, the physician's first thought should be to thoroughly examine all the sinuses, infected adenoid and tonsil tissues. An early removal of all infections found is imperative and the most important step in the care of these cases.

The infection all removed, we are now ready to start treatment with the idea of repairing the damage that has occured within the tympanic cavity and eustachian tube. A thorough operation by finger surgery upon the tube to dilate and remove all obstruction at the orifice and bougie the isthmus to insure free drainage and entilation. This is very important, as it is next to impossible to relieve a purulent infection of the tympanic cavity where an obstructed tube exists. The patient will soon begin to notice the taste of pus in the throat, especially after arising. This, of course, means the tube is open and drainage is free. The eustachian applicator with a cotton tip, dipped in a solution of 1-5000 metaphen is used twice weekly to remove the pus and keep the tube open. Irrigation of the external ear is now started with a normal saline solution. Much care must be exercised, if the drum head is entirely destroyed, not to use much pressure as the labyrinth is easily disturbed, which will be noticed by a loss of equilibrium. With the patient in a reclining position, the bad ear up, by means of an ear cup, one-half dropper of four per cent mercurochrome is instilled in the external auditory canal, forcing it deep into the cavity by means of a cotton tip applicator large enough to condense the air in the canal, which forces the solution down the eustachian tube and into all parts of the tympanic cavity. Any signs of chemical irritation arising from the mercurochrome would indicate a weaker solution should be used. To avoid stain on the external ear, a thorough painting of the parts with olive oil will suffice. In all these cases there exists obstruction in the cervical chain of lymphatics, which can be relieved by a pumping motion just beneath the clavical.

There is invariably a depletion of calcium content in the blood

stream which can be overcome by osteopathic stimulation to the para thyroid glands. This failing, then para thyroid extract should be administered. The diet should consist of a low carbohydrate and fat content. Osteopathic treatment to the regions of the sixth cervical, atlas and axis will materially hasten the recovery by establishing and normalizing the circulation of the ear.

The above routine treatment will relieve the greater per cent of otitis media in which no bone necrosis exists and will also benefit the permanent teeth leave but little space for the antrum. At the those cases where it does exist. The hearing will improve in direct proportion to the improvement of the infected area.

Parents should be educated to the dangers of otitis media and should not allow a child to harbor, indefinitely, a head cold or sinus infection, which is easily carried to the ear by blowing the nose hard or by allowing badly infected tonsils to remain in the throat.

The Development of the Nasal Accessory Sinuses

By Dr. E. C. Brann

THE development of the accessory sinuses is a much discussed subject in the last few years and so few authorities agree. We have started in this year with a number of children, starting when they are 24 hours old, and X-raying these cases each month so that we can study the growth of the sinuses. It will take us several years before we will be ready to make a report on this.

Onoii of the University Clinic for Diseases of the Nose and Throat, of Budapest, states in his book that in his investigation of specimens, he has found some valuable information. In speaking of the frontal sinuses he says that in the first year of life, it is about the size of a small pea and gradually increases in size until it reaches the normal size at about twenty years of age. He found many cases of diseased condition of the frontal sinuses between the ages of nine months and fifteen years.

In his report on the maxillary sinus, he says that this is the earliest to appear, having been found even before the middle of foetal life, and does not attain complete development until comparatively late; nor does it show any considerable growth before the second year. That after the eruption of the milk teeth the germs of commencement of the second dentition, about the seventh year, it begins to grow more rapidly. Diseased conditions were found in children as young as three and a half years. If attempt is made to puncture the maxillary sinus before about the twelfth to fifteenth year, one must keep in mind the heighth of the sinus and puncture through the middle meatus.

He says that the ethomoid cells, both anterior and posterior groups, were fairly well developed in the first year of life and do not develop as rapidly as other sinuses.

In speaking of the sphenoid sinus, he says that this is very slow

in developing and does not reach normal growth until adult life and is the less frequent one diseased in childhood.

Now in taking this into consideration, let us consider the diseased conditions found in the sinuses before the ages of complete development. In the maxillary sinuses, up to the age of fifteen, it is practically always necessary for us to do a puncture through the middle meatus instead of the inferior meatus as in adults.

I am becoming more firmly convinced each year that most of the sinus infection in a child is found in the ethomoid sinus and that the greatest causative factor in these cases are the adenoid growths that obstruct aireation of the mucous membranes of the nose.

Dear Editor: I would like to ask your advice. Recently I became acquainted with a young lady and the acquaintance rapidly ripened into what seemed to be a deep and lasting affection. She has a wonderful love and appreciation for nature, so I thought I would send her flowers. Somehow, they never seemed to be the right kind. She broke several dates and on two occasions left me with theatre tickets on my hands. One beautiful moonlight night while taking a stroll through a small grove and under a spreading chestnut tree, she promised to be mine. Later she named the date. I just learned she has eloped with another man. Have I been crossed or double crossed?

—Bill Lamb?

Dear Bill: Neither; crisscrossed. That wasn't a chestnut tree. The moonlight deceived you. It was a slippery elm.

Dr. Jerome Watters was walking along a street when he saw a crowd of boys sitting in a ring with a small dog in the center.

"What are you doing with the dog?" he asked.

"Whoever tells the biggest lie gets the dog."

"I'm surprised at you boys. When I was your age I never told a lie."

There was a moment's silence, then one of the boys said: "Give the man the dog."

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